

NYC Employees' Retirement System Investment Meeting (Public)

Schedule	Wednesday, September 20, 2023 9:30 AM — 1:30 PM EDT
Venue	In-Person + Virtual (Location: NYC Comptroller's Office, 1 Centre Street, 10th Floor, Rm. 1005 Northside) "Southside Entry for Visitors"
Organizer	Kim Boston

Agenda

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PUBLIC AGENDA -

Welcome and Opening

Quarterly Presentation (Public):

- Market Overview
- Performance Update
- Risk Update (if any questions)



NYCERS INVESTMENT MEETING

PUBLIC SESSION



September 20, 2023

US AND GLOBAL INFLATION

Fed chair warns US inflation battle not over and hints at further rate rises

Source: The Guardian

Europe's Economy Expanded in Spring, and Inflation Has Eased

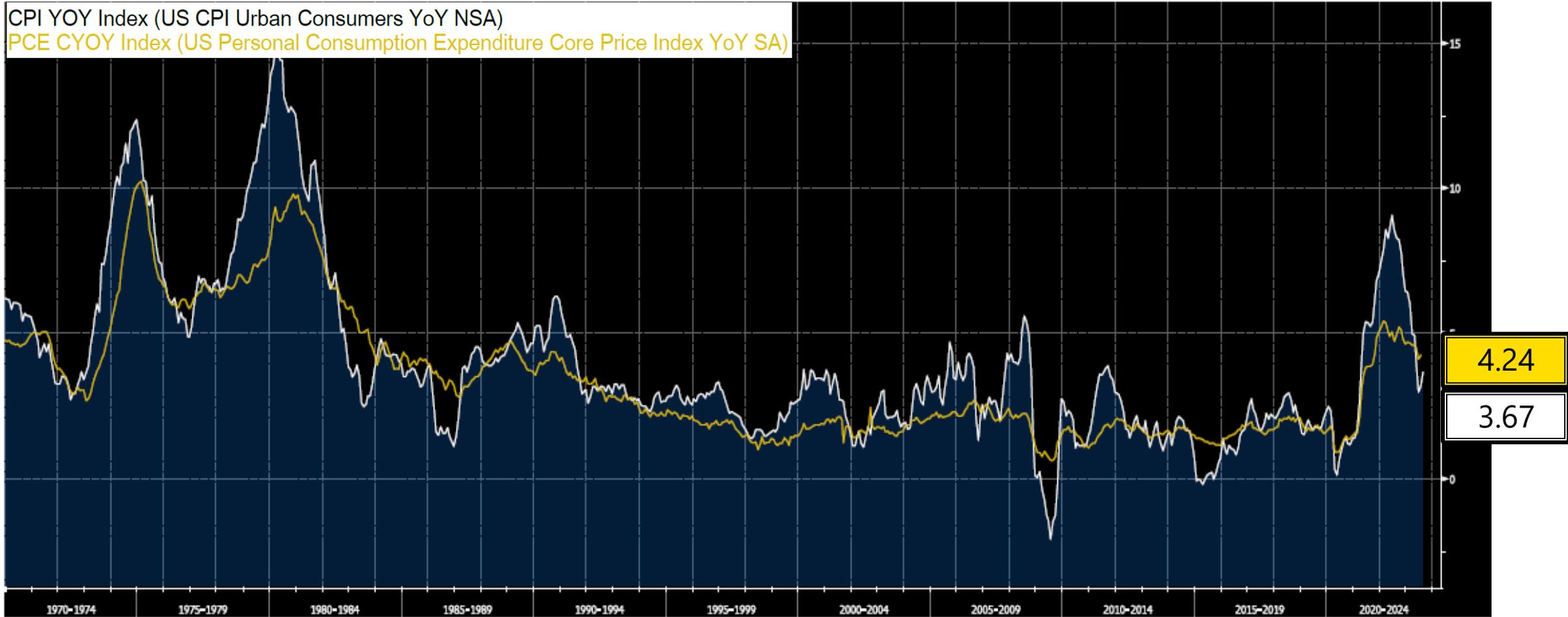
Source: New York Times

Deflation: Why falling prices in China raise concerns

Source: BBC

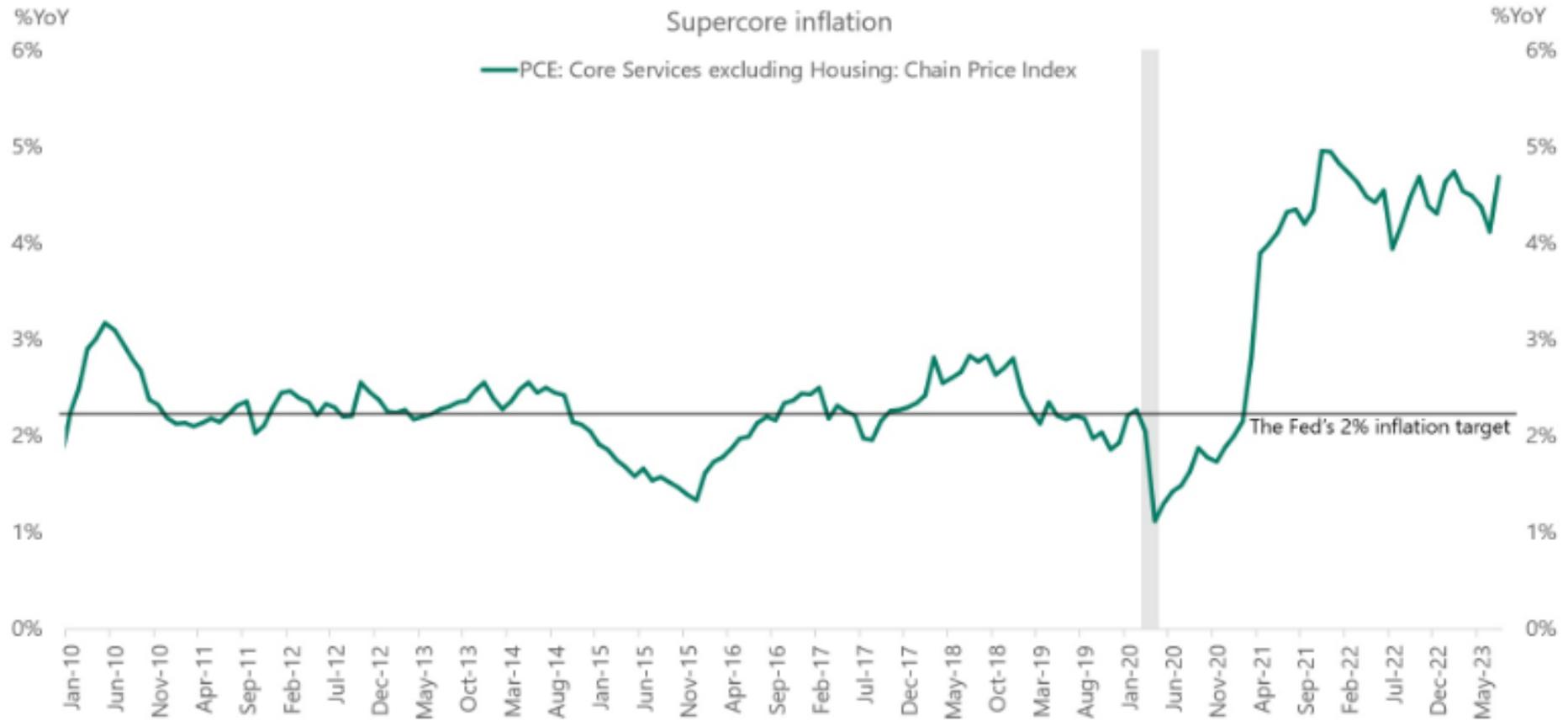


INFLATION



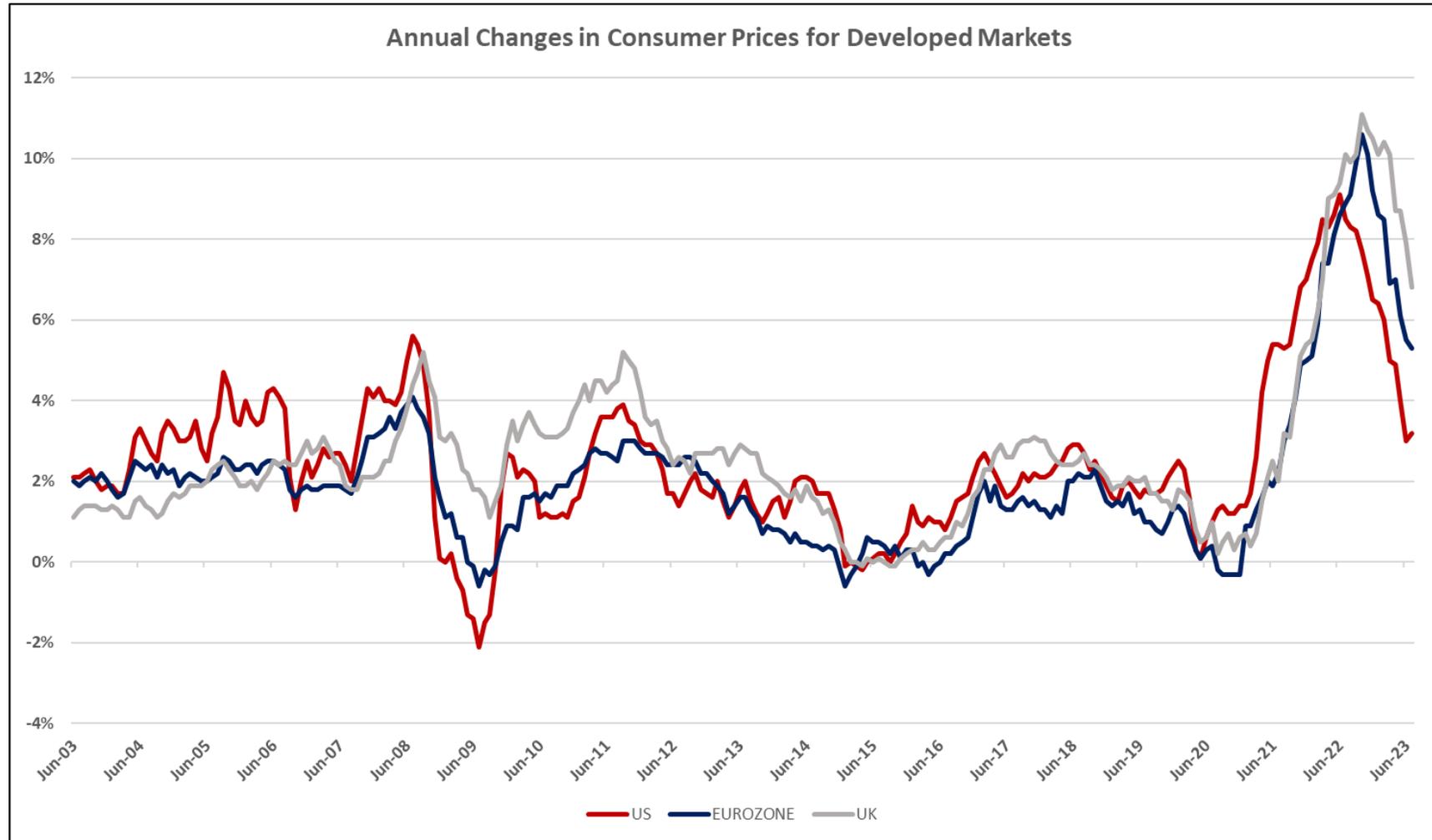
INFLATION NOT FALLING IN ALL SECTORS

Supercore inflation not moving down to the Fed's 2% inflation target



INFLATION AROUND THE WORLD

Eurozone and UK following trends in U.S.



US EMPLOYMENT

The US job market continues its cooldown, adding just 187,000 positions last month

Source: CNN

US jobs growth slowed more than forecast in July

Economy added 187,000 jobs and unemployment rate slipped to 3.5%

Source: Financial Times

Pace of U.S. Hiring Slows but Remains Solid

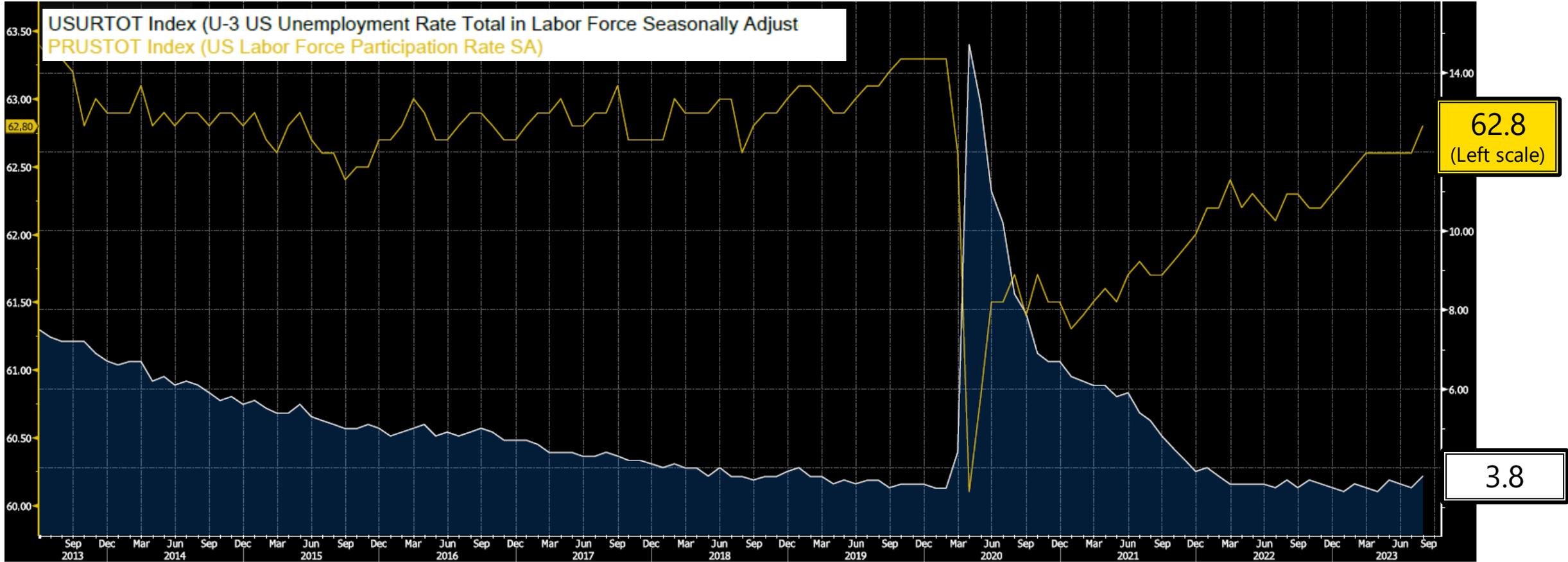
The labor market moderated in July, reflecting a cooling economy. But wages grew slightly more than expected, and are running faster than policymakers would like as they fight inflation.

Source: New York Times



UNEMPLOYMENT

Unemployment and labor participation each ticked up in August.



US AND NON-US ECONOMIC GROWTH

Wall Street is hiking forecasts for economic growth

Source: Axios

Europe's economy is growing again as inflation continues to fall

Source: CNN

China's economy misses growth forecasts, raising the odds of more support for its tepid recovery

Source: AP

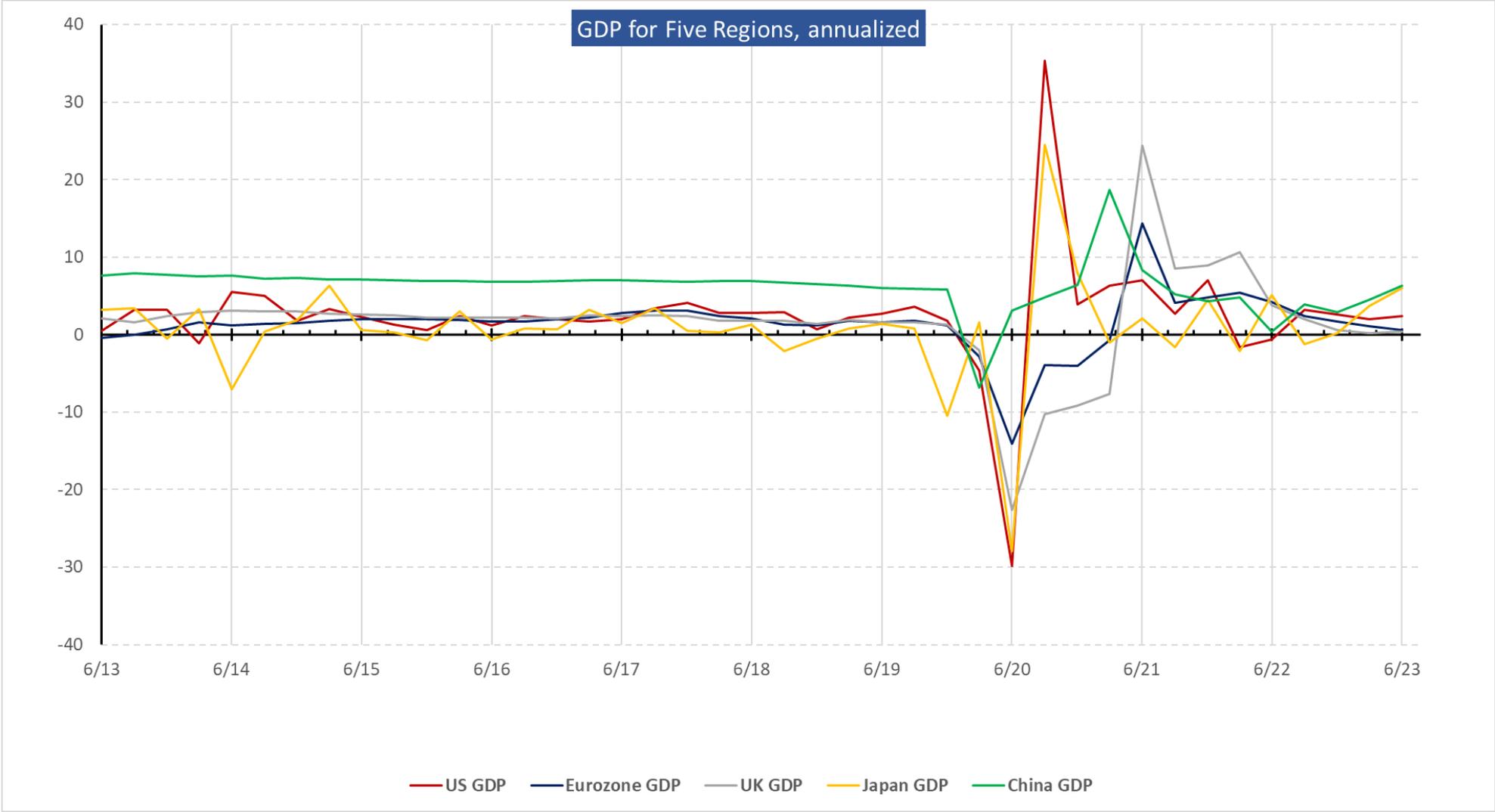
U.S. Economic Growth Accelerates, Defying Slowdown Expectations

Economy grew 2.4% last quarter, suggesting the U.S. is steering clear of recession

Source: WSJ



ECONOMIC GROWTH



US AND GLOBAL INTEREST RATES

Powell says Fed could raise interest rates further if economy, job market don't cool

Source: USA Today

Powell warns strong economy could lead to new interest rate hikes

Source: Bloomberg

Christine Lagarde vows to keep EU interest rates high 'as long as necessary' to slay the beast of inflation

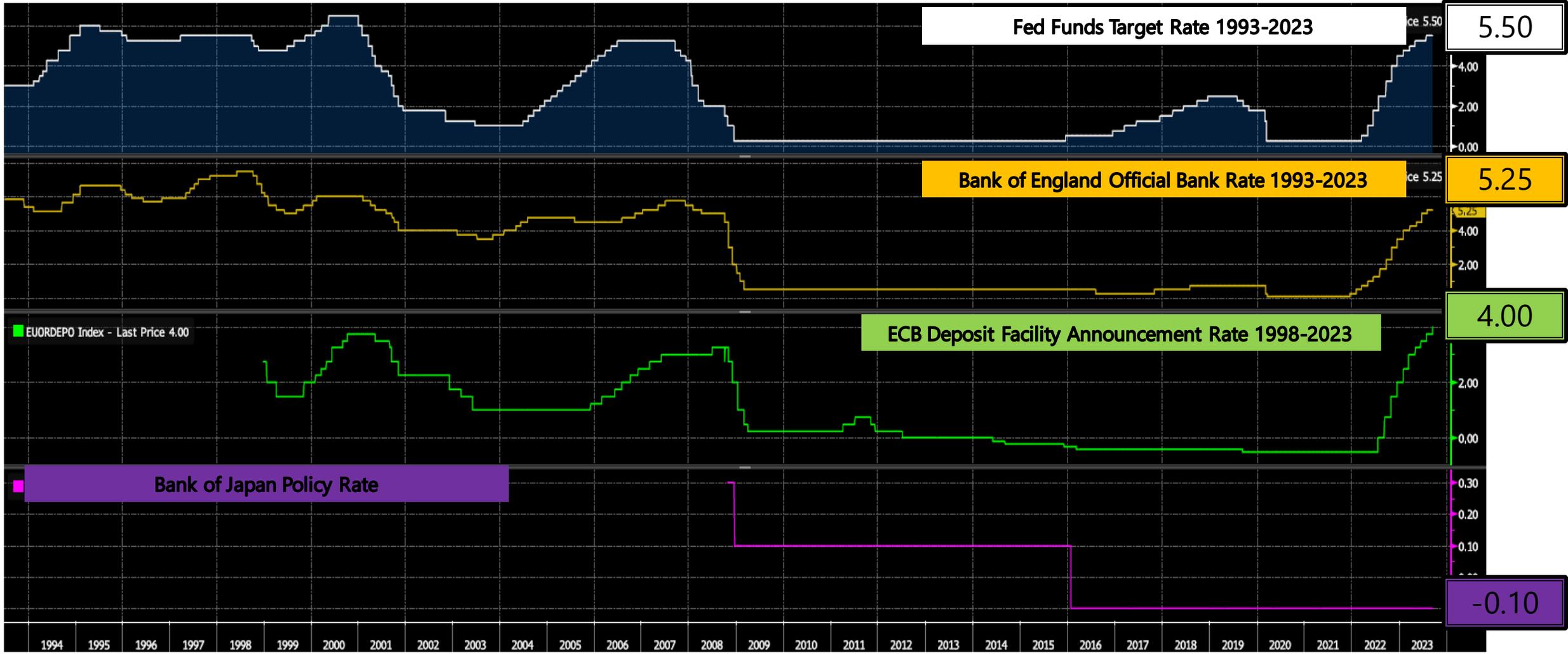
Source: Fortune

China cuts key interest rate as recovery falters

Source: BBC



GLOBAL RATE TARGETS



US CREDIT SPREADS AND US TREASURY YIELDS

Analysis: Bond market's newfound economic optimism may be shortsighted

Source: Reuters

Treasury yields end Friday mixed after Powell signals more rate hikes ahead

Source: CNBC

Treasury Yields Hit Highest Since 2007 on Elevated Rate Fears

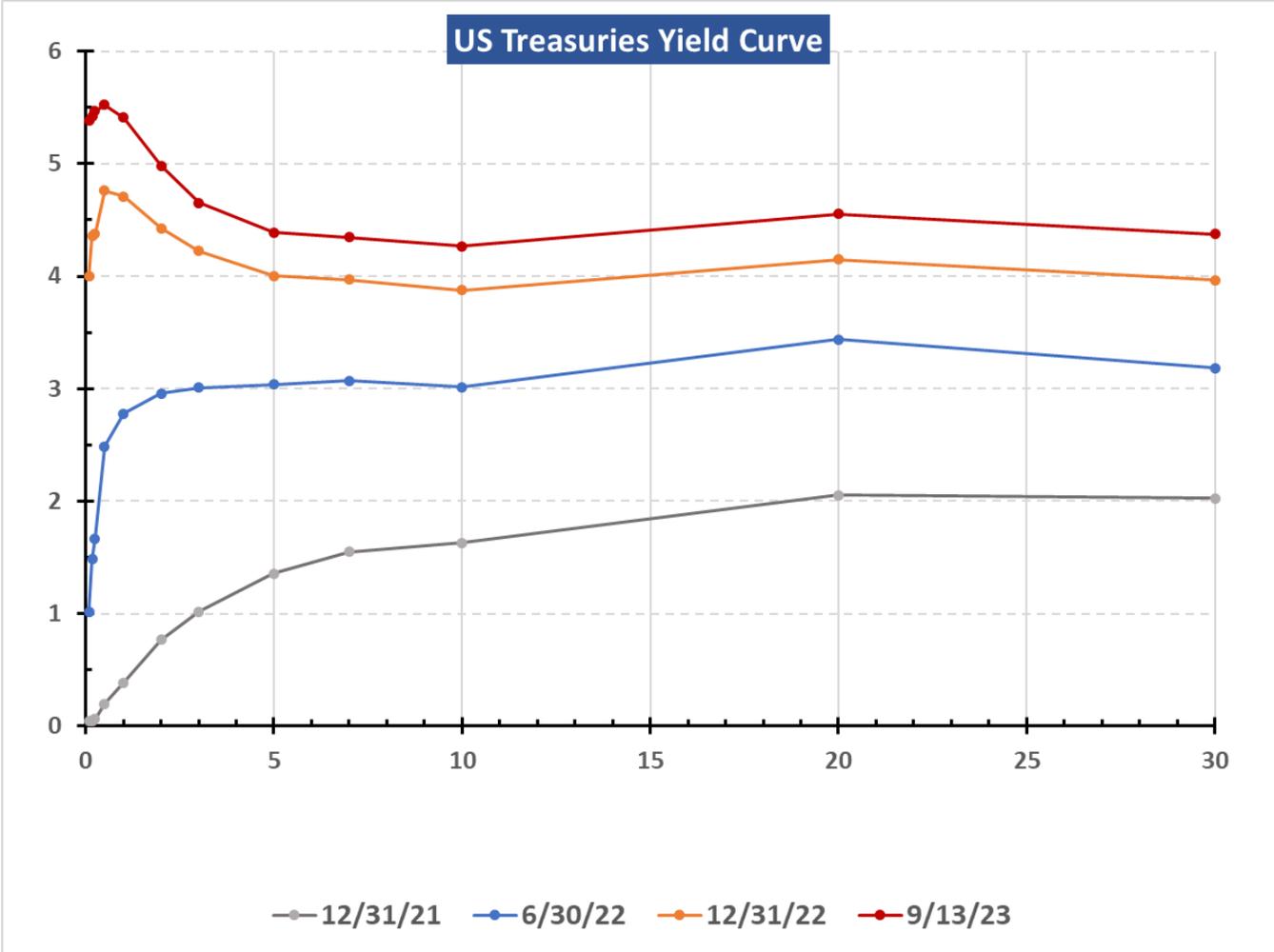
- Rising real yields reflect firmer economy and higher deficits
- 10-year yield hits 4.35%, highest level since financial crisis

Source: Bloomberg



U.S. TREASURY YIELDS AND SPREADS

The US Treasury yield curve has gone from normal to inverted over the last 18 months.



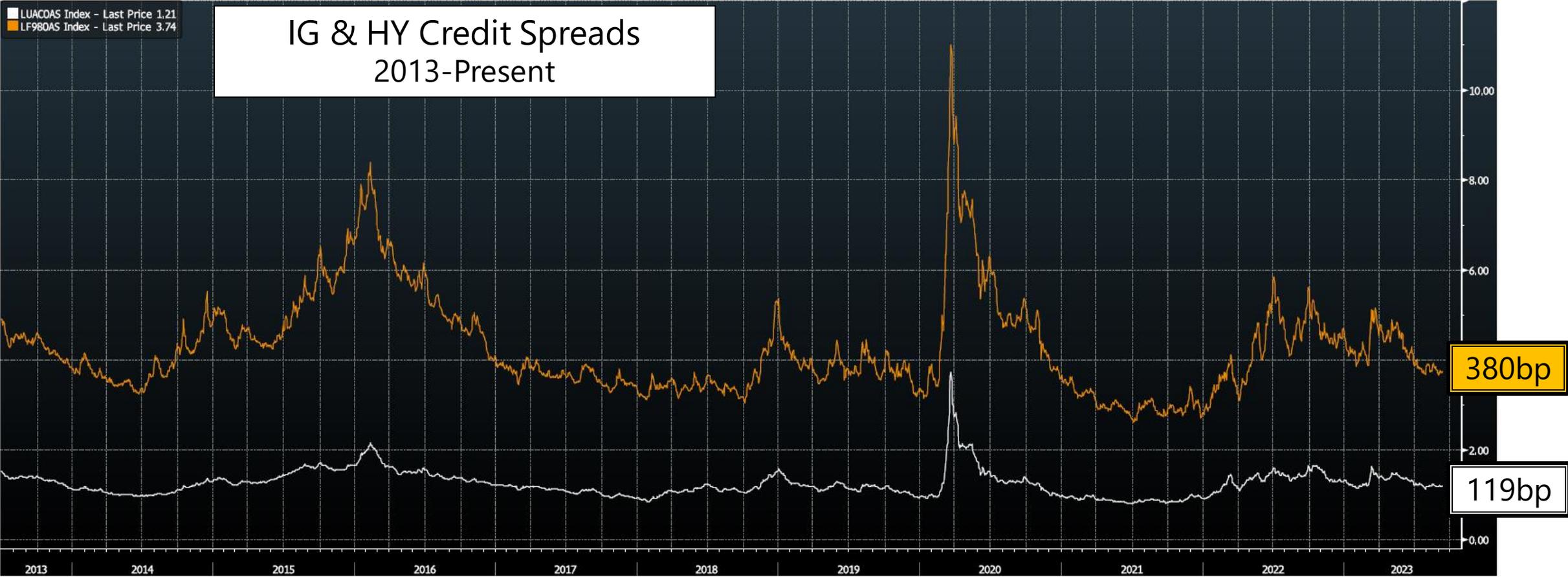
U.S. TREASURY YIELD HISTORY



10 Years Ended September 14, 2023



CREDIT SPREADS



10 Years Ended September 14, 2023



US STOCK AND BOND MARKET RETURNS

It's Been a Good Stretch for the Markets, but Not as Good as It Looks

While stocks, bonds and money market funds have generated positive returns for the year, a quirk in the calendar is creating deceptively strong performances.

Source: New York Times

The stock market has soared this year, but will it last? Experts weigh in

The Nasdaq has climbed roughly 36% this year, while the S&P 500 has jumped 18%.

Source: ABC

Analysis: Bond market's newfound economic optimism may be shortsighted

Source: Reuters



BENCHMARK RETURNS, Q2-2023

Asset Class	Index	Q2-23	1 Year	3Year	5 Year	Expected*
Equities - U.S.	Russell 3000	8.39%	18.95%	13.89%	11.39%	5.80%
Equities - Developed Intl	MSCI World ex USA IMI Net	2.67%	16.35%	8.87%	4.17%	6.80%
Equities - Emerging Intl	MSCI EMERGING MARKETS	0.90%	1.75%	2.32%	0.93%	8.30%
Debt - US Govt Long Duration	FTSE Treasury 10+	-2.30%	-7.50%	-12.10%	-0.89%	2.65%
Debt - US Government	NYC Treas/Agency +5	-1.94%	-4.60%	-8.19%	0.00%	2.60%
Debt - Investment Grade	Bloomberg U.S. Corporate IG	-0.29%	1.55%	-3.43%	1.62%	3.60%
Debt - High Yield	Bloomberg U.S. HY -2% Issuer Cap	1.75%	9.07%	3.12%	3.34%	4.80%

*Average of consultant long-term arithmetic expected market returns as of 1H '20



WORLD EQUITY MARKETS

World Equity Indices						
Index	%Ytd	%YtdCur	P/E	Est FY1	Est FY2	DvYld
Americas						
DOW JONES	+4.41%	+4.41%	21.27	18.76	16.00	2.08
S&P 500	+15.37%	+15.37%	22.07	20.00	17.93	1.57
NASDAQ	+30.99%	+30.99%	48.51	28.89	23.19	0.80
S&P/TSX Comp	+3.16%	+2.93%	15.15	14.19	12.82	3.37
S&P/BMV IPC	+10.66%	+28.94%	13.86	12.64	11.03	3.63
IBOVESPA	+5.96%	+14.39%	7.92	8.43	7.78	5.29
EMEA						
Euro Stoxx 50	+13.12%	+14.18%	13.75	11.93	11.31	3.51
FTSE 100	-1.52%	+2.57%	11.25	10.55	10.03	4.17
CAC 40	+13.16%	+14.22%	13.84	12.34	11.75	3.21
DAX	+13.32%	+14.39%	16.00	11.36	10.39	3.70
IBEX 35	+15.45%	+16.54%	11.54	10.44	10.23	4.03
FTSE MIB	+20.45%	+21.58%	8.71	7.88	7.83	4.48
OMX STKH30	+6.39%	+0.89%	15.99	13.92	13.56	3.39
SWISS MKT	+2.91%	+7.56%	20.50	16.86	15.30	3.11
Asia/Pacific						
NIKKEI	+23.28%	+10.26%	17.90	18.36	16.84	1.90
HANG SENG	-8.34%	-8.86%	6.14	9.11	8.30	3.89
CSI 300	-3.07%	-8.31%	13.87	12.13	10.42	2.59
S&P/ASX 200	+1.72%	-4.12%	17.13	15.40	14.70	4.58



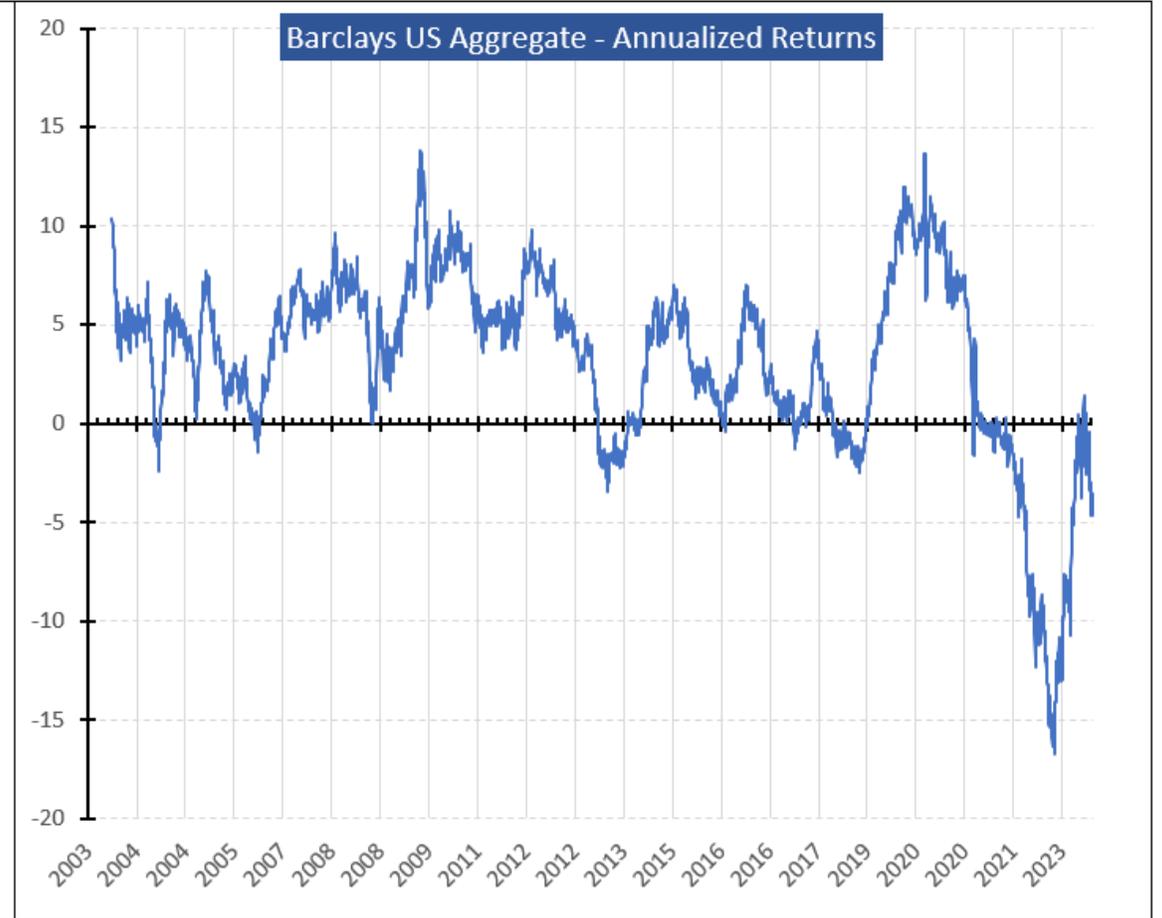
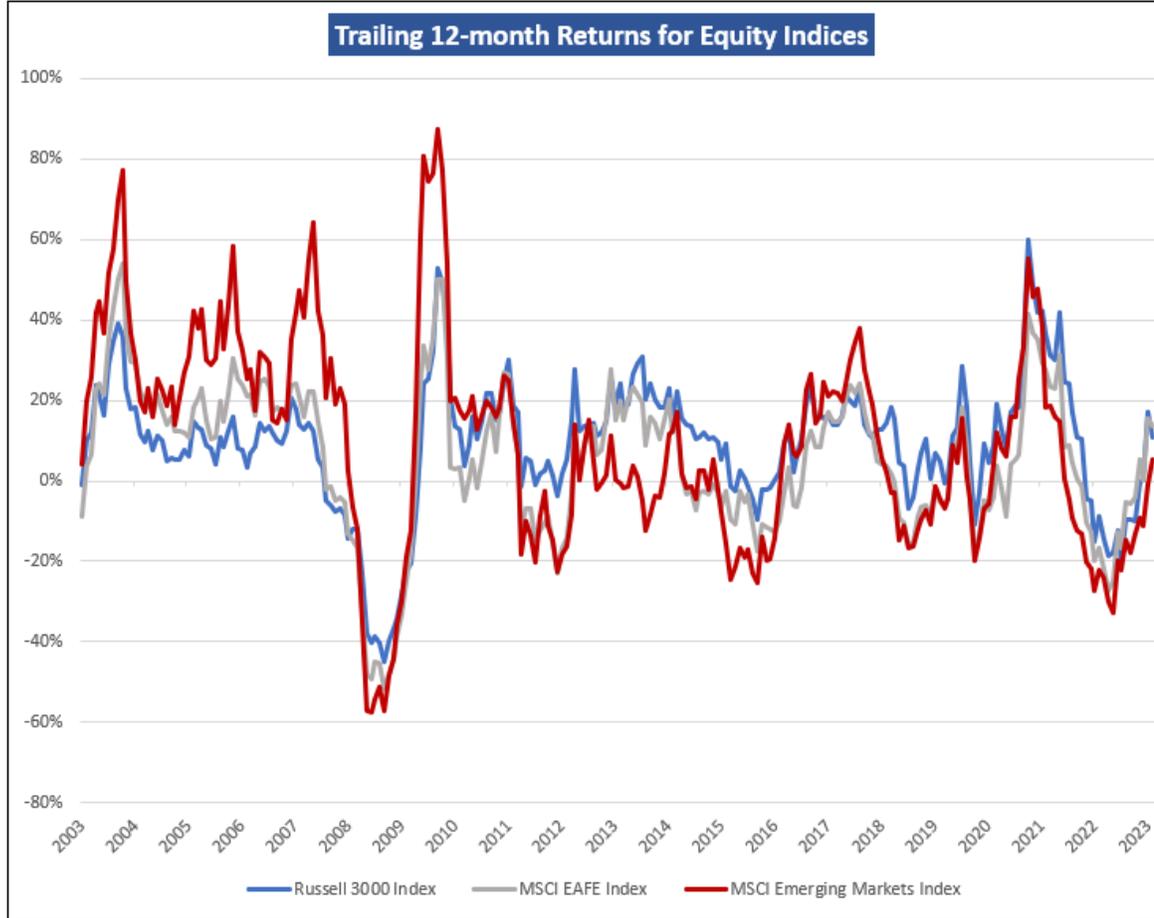
WORLD BOND MARKETS

World Bond Markets									
Maturity	10 Year				Data Range	YTD			
Region	RMI	Security		Yld	Low	Range	High	YTD Chg	
					◆ Avg ● Now				
1) Americas									
10) United States	☐	T 3 ⁷ / ₈ 08/33	⌵	4.216	3.305	◆ ●	4.338	+34.1	
11) Canada	☐	CAN2 ³ / ₄ 06/33	⌵	3.679	2.720	◆ ●	3.810	+38.2	
12) Brazil (USD)	☐	BRAZIL6 10/33	⌵	6.448	5.675	◆ ●	6.609	+36.5	
13) Argentina (USD)	☐	ARGENT8.28 33	⌵	0.000					
14) Mexico (USD)	☐	MEX3 ¹ / ₂ 02/34	⌵	5.797	5.078	◆ ●	5.978	-8.4	
2) EMEA									
20) United Kingdom	☐	UKT3 ¹ / ₄ 01/33	⌵	4.436	3.000	◆ ●	4.739	+77.9	
21) France	☐	FRTR 3 05/33	⌵	3.090	2.441	◆ ●	3.246	-.6	
22) Germany	☐	DBR 2.6 08/33	⌵	2.567	2.010	◆ ●	2.741	+.9	
23) Italy	☐	BTPS 4.35 33	⌵	4.229	3.746	◆ ●	4.601	-45.2	
24) Spain	☐	SPGB 3.55 33	⌵	3.586	2.950	◆ ●	3.751	-4.9	
25) Portugal	☐	PGB1.65 07/32	⌵	3.247	2.849	◆ ●	3.605	-32.6	
26) Sweden	☐	SGB1 ³ / ₄ 11/33	⌵	2.796	1.792	◆ ●	2.861	+48.1	
27) Netherlands	☐	NETHER2 ¹ / ₂ 33	⌵	2.903	2.259	◆ ●	3.087	+3.2	
28) Switzerland	☐	SWISS 3 ¹ / ₂ 33	⌵	0.918	.760	◆ ●	1.491	-62.6	
29) Greece	☐	GGB4 ¹ / ₄ 06/33	⌵	3.867	3.501	◆ ●	4.556	-63.8	
3) Asia/Pacific									
30) Japan	☐	JGB 0.4 06/33	⌵	0.658	.160	◆ ●	.663	+25.4	
31) Australia	☐	ACGB 3 11/33	⌵	4.137	3.180	◆ ●	4.319	+9.2	
32) New Zealand	☐	NZGB 3 ¹ / ₂ 33	⌵	4.995	3.895	◆ ●	5.124	+56.3	
33) South Korea	☐	KTB3 ¹ / ₄ 06/33	⌵	3.845	3.138	◆ ●	3.977	+31.3	
34) China	☐	CGB2.67 05/33	⌵	2.577	2.534	◆ ●	2.919	-25.3	



MARKET RETURNS

Trailing 12-month returns over the last 20 years



RECENT NEWS

Fitch downgrades US debt on debt ceiling drama and governance worries

Source: CNN

Fitch cuts US credit rating to AA+; Treasury calls it 'arbitrary'

Source: The Reuters

Germany plans to double AI funding in race with China, U.S.

Source: Reuters

AI Won't Supercharge the US Economy

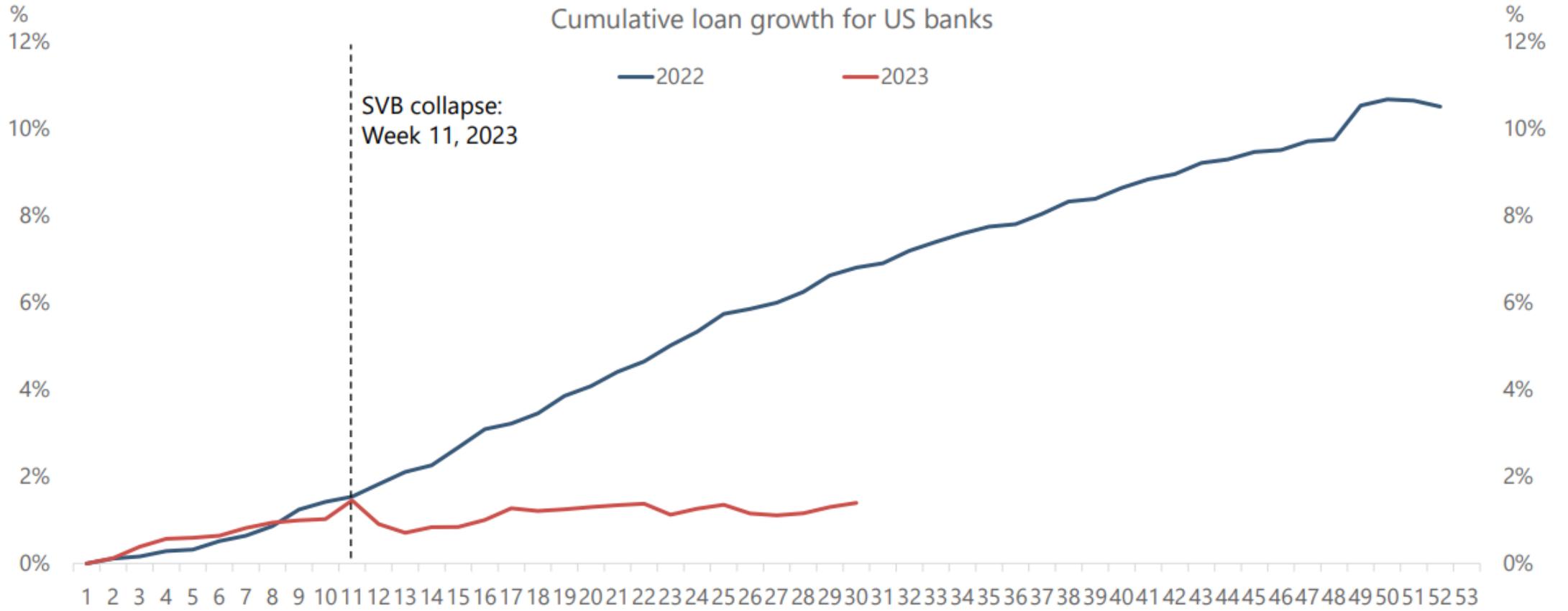
The technology will probably provide only a small boost to economic growth, but it could still have a significant impact in the long run.

Source: Bloomberg



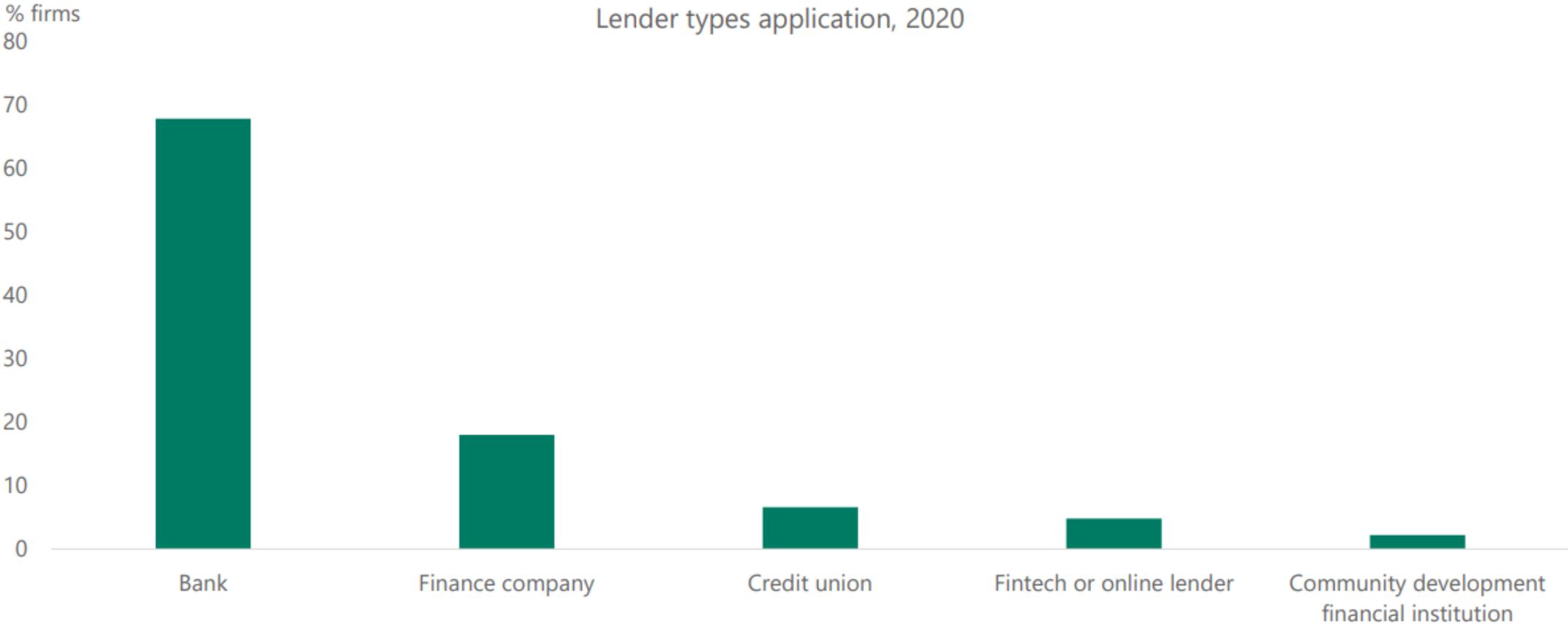
FOOD FOR THOUGHT

SVB having a permanent effect



FOOD FOR THOUGHT

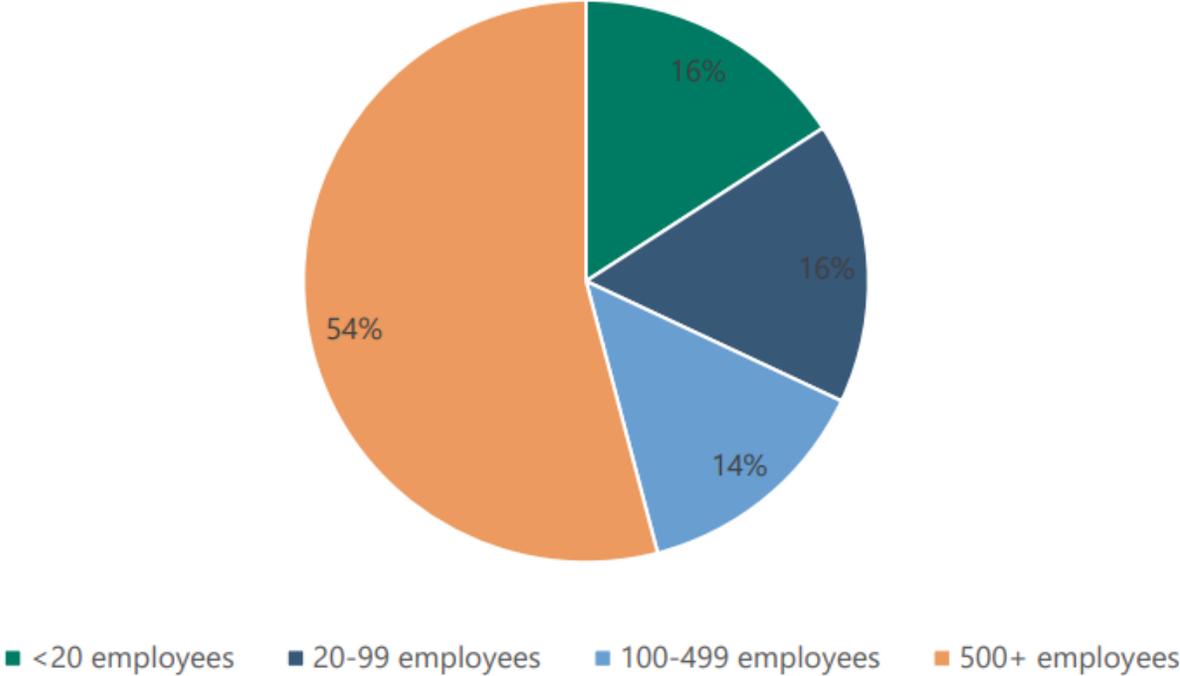
Banks are the most important source of financing for small businesses



FOOD FOR THOUGHT

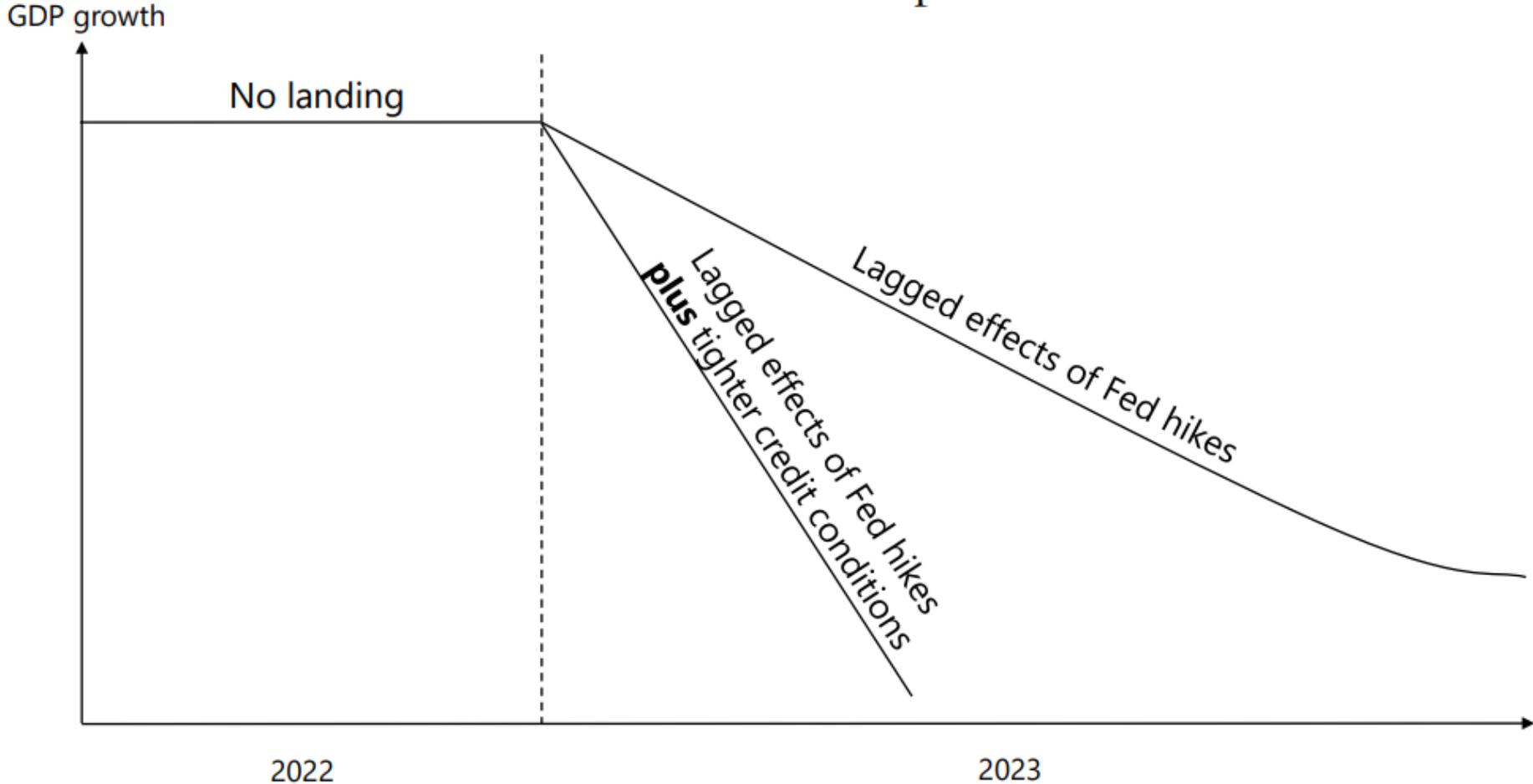
Half of US employment is in firms with fewer than 500 employees

Share of total employment by employment size of the firm, 2020



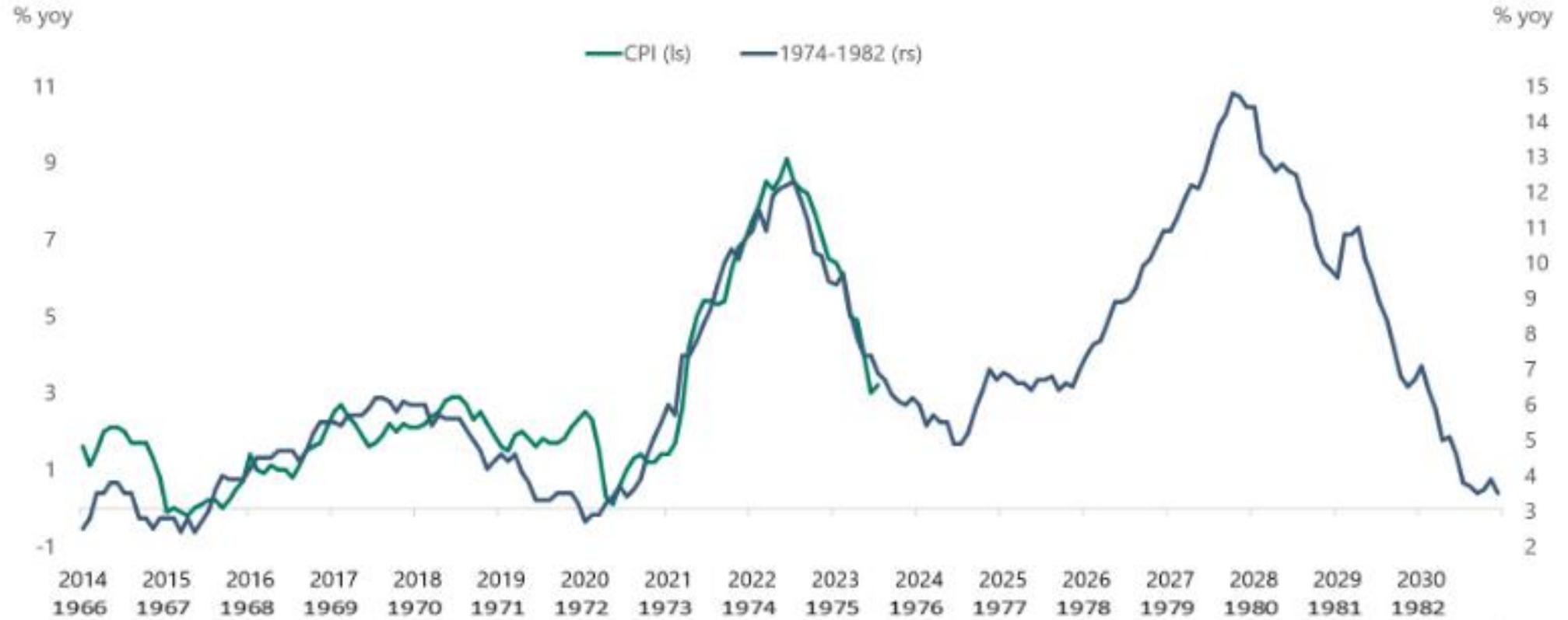
FOOD FOR THOUGHT

Lagged effects of Fed hikes combined with tighter credit conditions will create a sharper slowdown in the economy



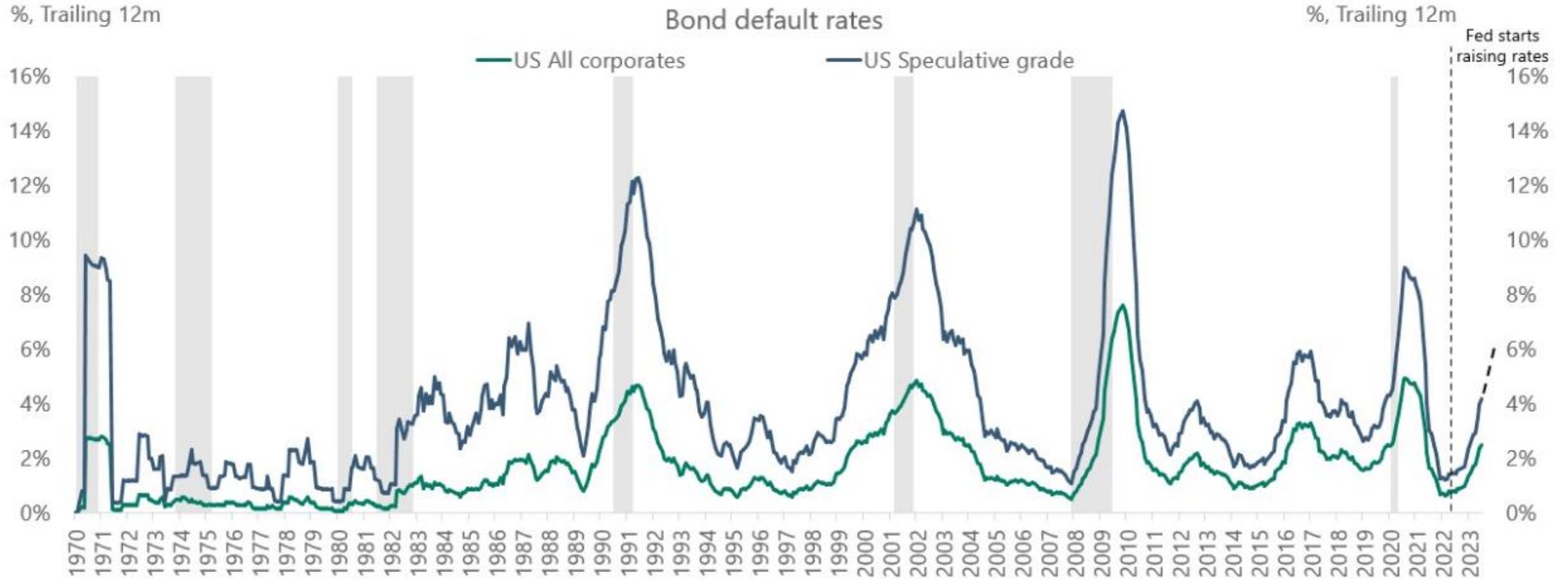
FOOD FOR THOUGHT

Inflation: Today vs 1970s



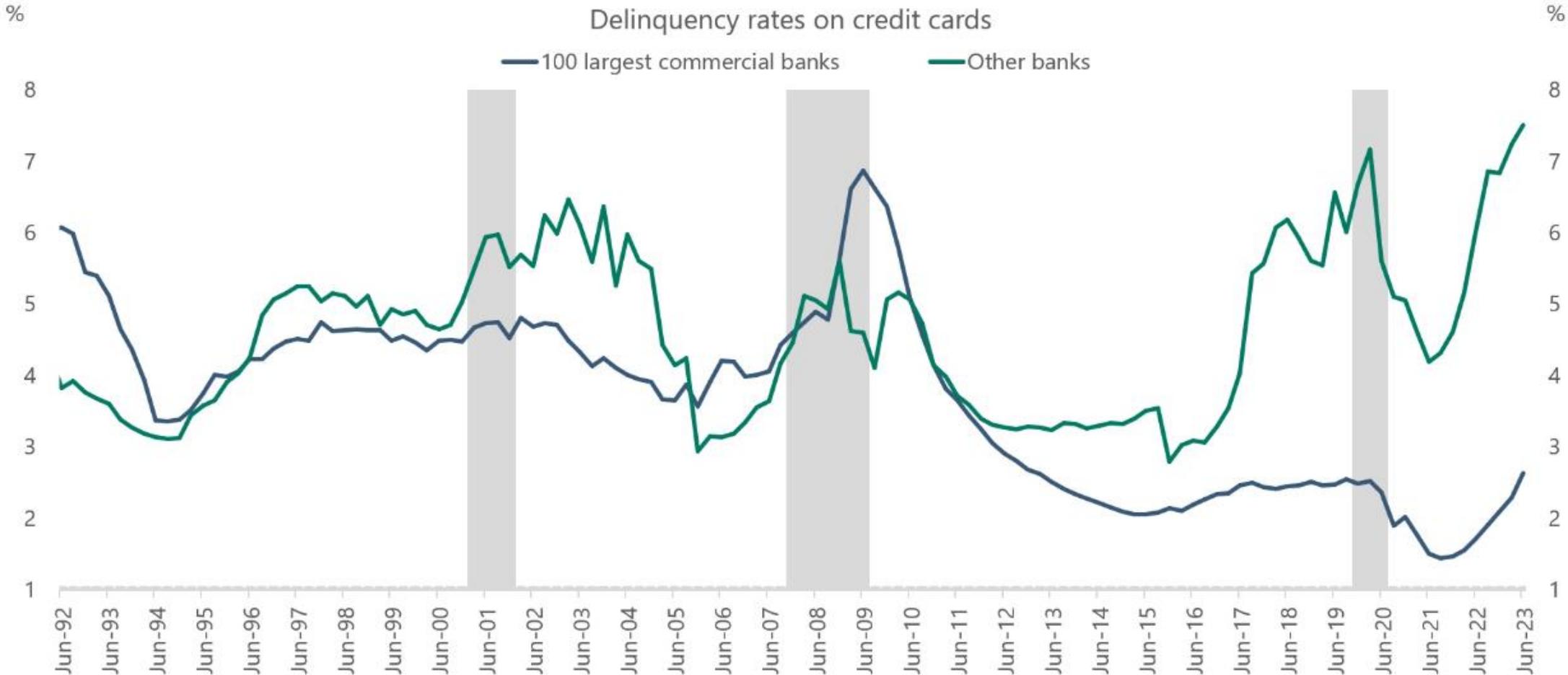
FOOD FOR THOUGHT

A default cycle has started, and markets are not paying attention



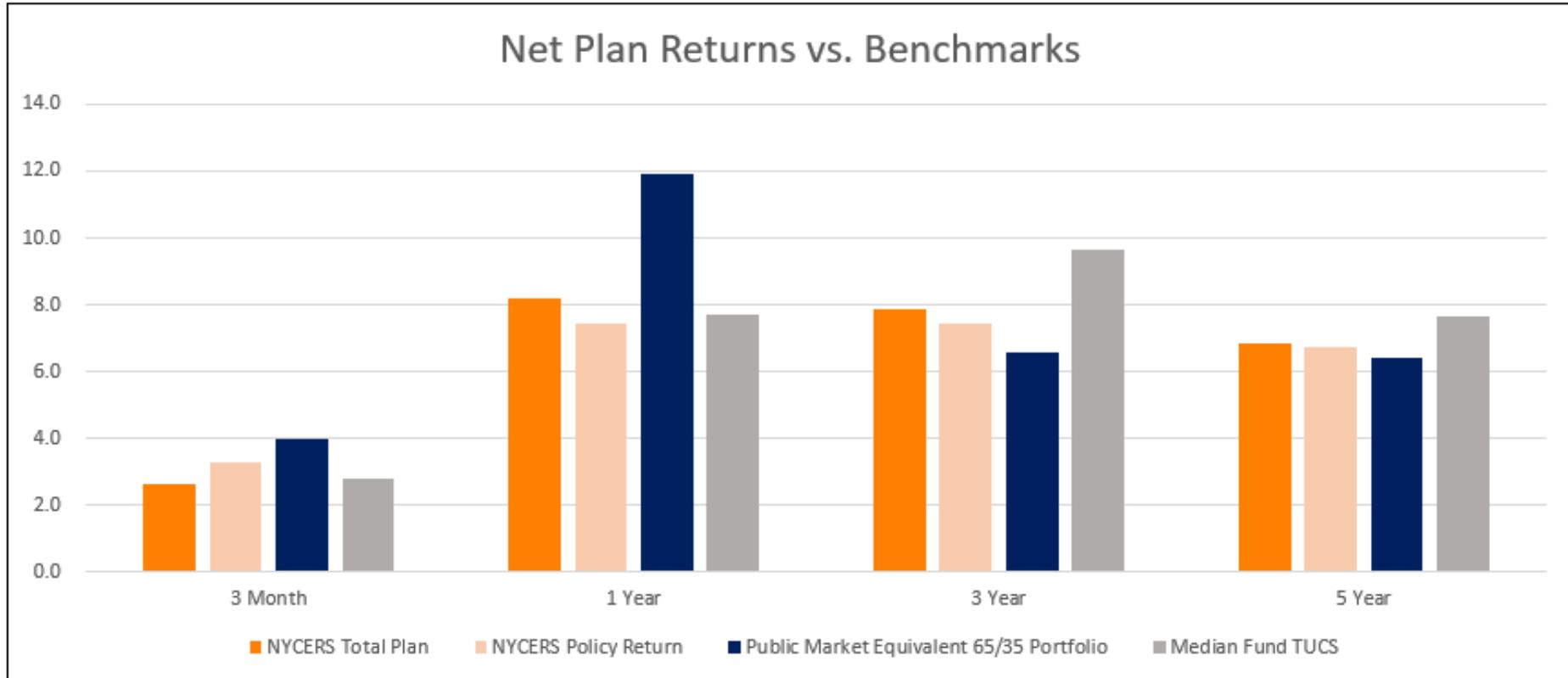
FOOD FOR THOUGHT

Credit card delinquency rates much higher for small banks



NYCERS PERFORMANCE REPORTING Q2-2023

NYCERS NET PLAN RETURNS AS OF 6/30/23



Aggregate Performance	3 Month	1 Year	3 Year	5 Year
NYCERS Total Plan	2.6	8.2	7.9	6.9
NYCERS Policy Return	3.3	7.4	7.4	6.7
Public Market Equivalent 65/35 Portfolio	4.0	11.9	6.6	6.4
Median Fund TUCS	2.8	7.7	9.7	7.7



NYCERS NET PUBLIC MARKET RETURNS BY STRATEGY AS OF 6/30/23

Investment Strategy	AUM				
	(Millions)	3 Month	1 Year	3 Year	5 Year
U.S. Equity	22,093	7.1	18.1	14.0	10.8
World ex-U.S.	8,672	3.4	21.5	8.2	5.1
Emerging Markets	3,851	3.3	7.8	5.8	1.7
Core Fixed Income	15,960	(0.7)	(0.6)	(3.9)	1.6
TIPS	2,676	(1.4)	(1.4)	(0.2)	2.5
High Yield	3,268	1.5	9.3	3.4	3.5
Convertible Bonds	1,458	2.6	8.1	4.5	5.1
ETI	828	(1.4)	(0.4)	(3.0)	1.6
Cash	293	1.4	4.1	1.6	2.1



NYCERS PUBLIC MARKETS EXCESS RETURNS IN BP AS OF 6/30/23

Investment Strategy	Benchmark	3 Month Excess	1 Year Excess	3 Year Excess	5 Year Excess
U.S. Equity	Russell 3000	(125)	(88)	7	(56)
World ex-U.S.	MSCI World ex-U.S. IMI	77	517	(67)	90
Emerging Markets	MSCI Emerging Markets	243	608	145	78
Core Fixed Income	NYC Custom Structured Index	7	22	9	(45)
TIPS	BB Global Inflation Linked TIPS	2	(1)	(3)	(3)
High Yield	NYC Custom High Yield Benchmark	(21)	22	24	16
Convertible Bonds	ICE BofA All US Converts	(242)	(299)	(381)	(497)
ETI	NYC Custom ETI Benchmark	(80)	30	41	79
Total NYCERS	NYCERS Policy Benchmark	(66)	75	45	13

Source: State Street



NYCERS NET PRIVATE MANAGER RETURNS BY STRATEGY AS OF 6/30/23

Investment Strategy	1 Year	3 Year	5 Year	10 Year	Since Inception
Private Equity	0.2	23.4	15.5	13.3	11.1
Private Real Estate Core	(2.8)	9.8	8.0	9.4	6.6
Private Real Estate Non-Core (Opp.)	(0.3)	13.1	9.1	11.8	10.9
Infrastructure	8.2	14.0	11.9	n/a	12.2
Opportunistic Fixed*	7.7	10.5	7.3	6.9	7.6

Returns for periods ended March 31, 2023, unless otherwise noted.

* Returns through June 30, 2023.

Source: State Street, StepStone Group



NYCERS PRIVATE MARKETS EXCESS RETURNS IN BP AS OF 6/30/23

Investment Strategy	Benchmark	1 Year Excess	3 Year Excess	5 Year Excess	10 Year Excess	Since Inception Excess
Private Equity	Russell 3000	770	520	510	130	70
Private Real Estate Core	NCREIF ODCE Net	110	230	140	90	110
Private Real Estate Non-Core (Opp.)	NCREIF ODCE Net	360	560	250	330	540
Infrastructure	5-year Rolling CPI +400bp	27	607	400	n/a	425
Opportunistic Fixed*	50% JPM Gbl HY/50% CS Levered Loan	(192)	519	306	233	202

Returns vs. benchmark for periods ended March 31, 2023, unless otherwise noted.

* Returns through June 30, 2023.

Source: State Street, StepStone Group



NYCERS SUMMARY OF REBALANCING ACTIVITIES

- Activities between April 1, 2023 and June 30, 2023

From		Amount (\$MM)	To		Amount (\$MM)
World ex USA	Large & Mid Cap	400	Cash Desk		535
	Small Cap	50	Fixed Income	Intermediate Term Treasury	230
US Equity	Large & Mid Cap	380		Credit	150
	Small Cap	50		Mortgages	150
Fixed Income	TIPS	185			
Total Outflow		1,065	Total Inflow		1,065

Source: BAM Risk



RISK MANAGEMENT

QUARTERLY REVIEW

NYCERS: TOTAL PLAN SUMMARY

Summary	1. Market Portfolio		2. Policy Benchmark		3. NYCERS	
	Q2 '23	Change	Q2 '23	Change	Q2 '23	Change
Portfolio Construction						
Equity Allocation	65.0%	+0.0%	63.5%	+0.0%	65.1%	+0.5%
Interest Rates Duration (*)	2.2	-0.07	1.7	-0.05	1.8	-0.04
Credit Spread Duration (*)	1.3	-0.01	1.0	+0.01	1.0	+0.01
Portfolio Risks						
Total Risk	11.7%	-0.7%	11.0%	-0.6%	12.1%	-0.7%
Active Risk	n/a	n/a	n/a	n/a	2.2%	-0.1%
Beta to S&P 500	0.61	-0.00	0.59	-0.00	0.63	-0.00

Notes

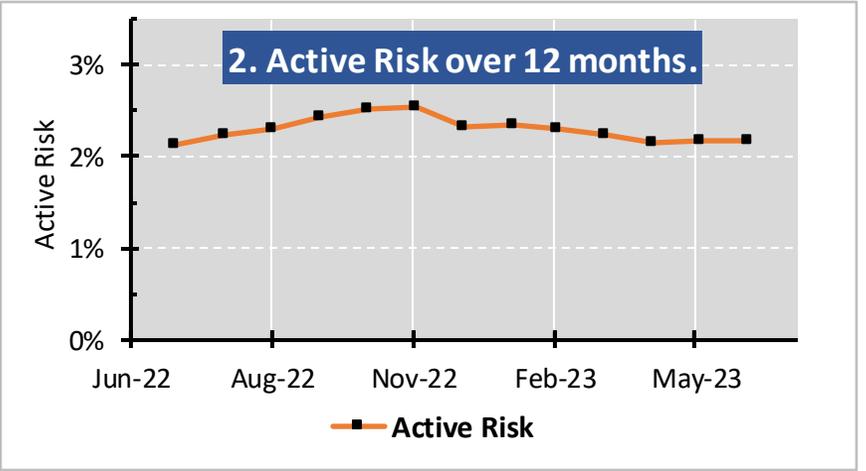
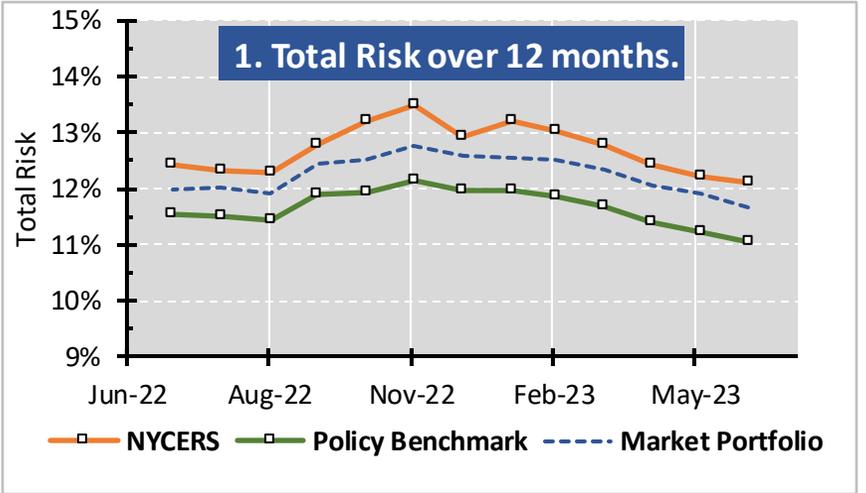
(*) - Public Markets Only

Market Portfolio:

65% MSCI ACWI + 35% Barclays US Agg

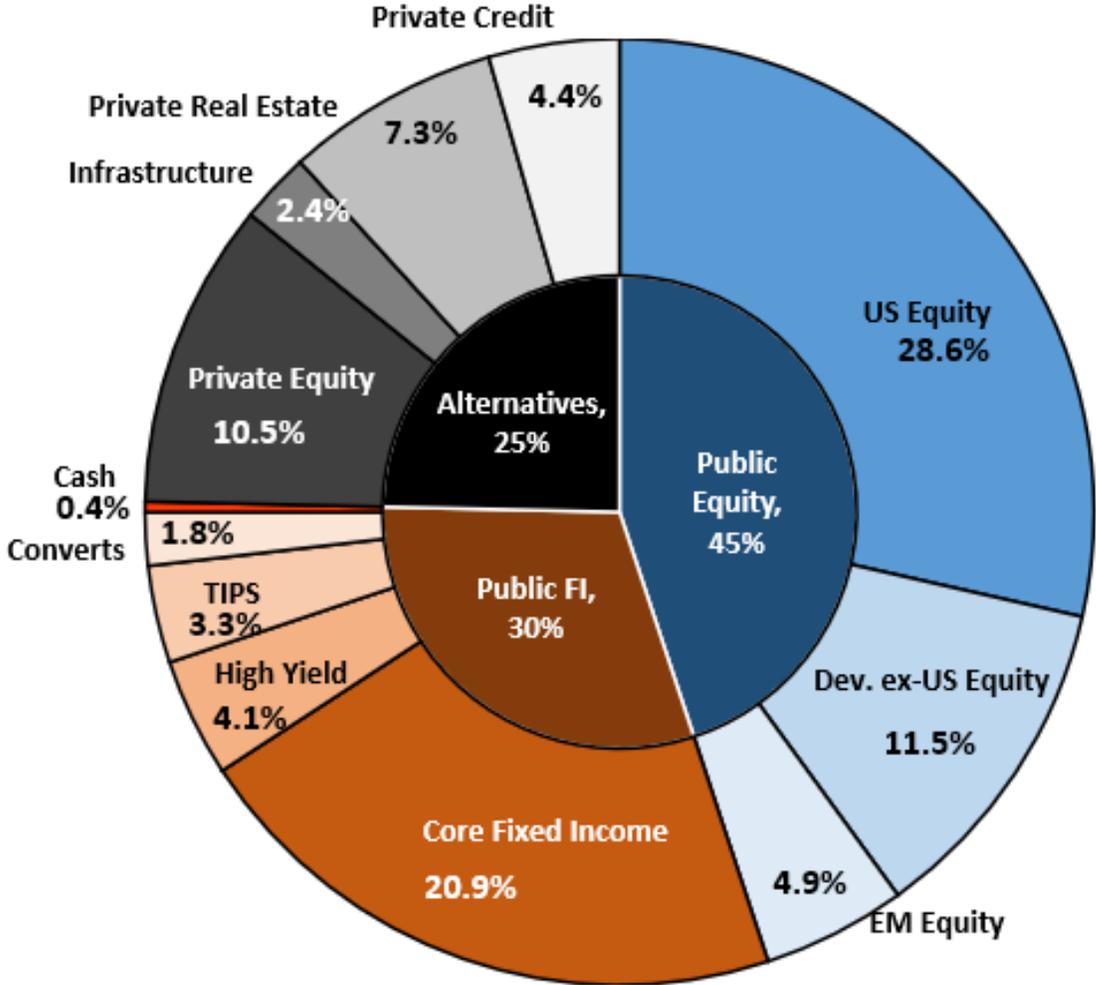
Policy Benchmark:

27% US Equity + 12% Developed Equity + 5% EM Equity + 22.5% Core FI + 3% HY + 3% Inflation Linked Bonds + 2% Convertible Bonds + 8% Private Equity + 3.5% RE Core + 4% RE Opportunistic + 4% Infrastructure + 6% Private Credit

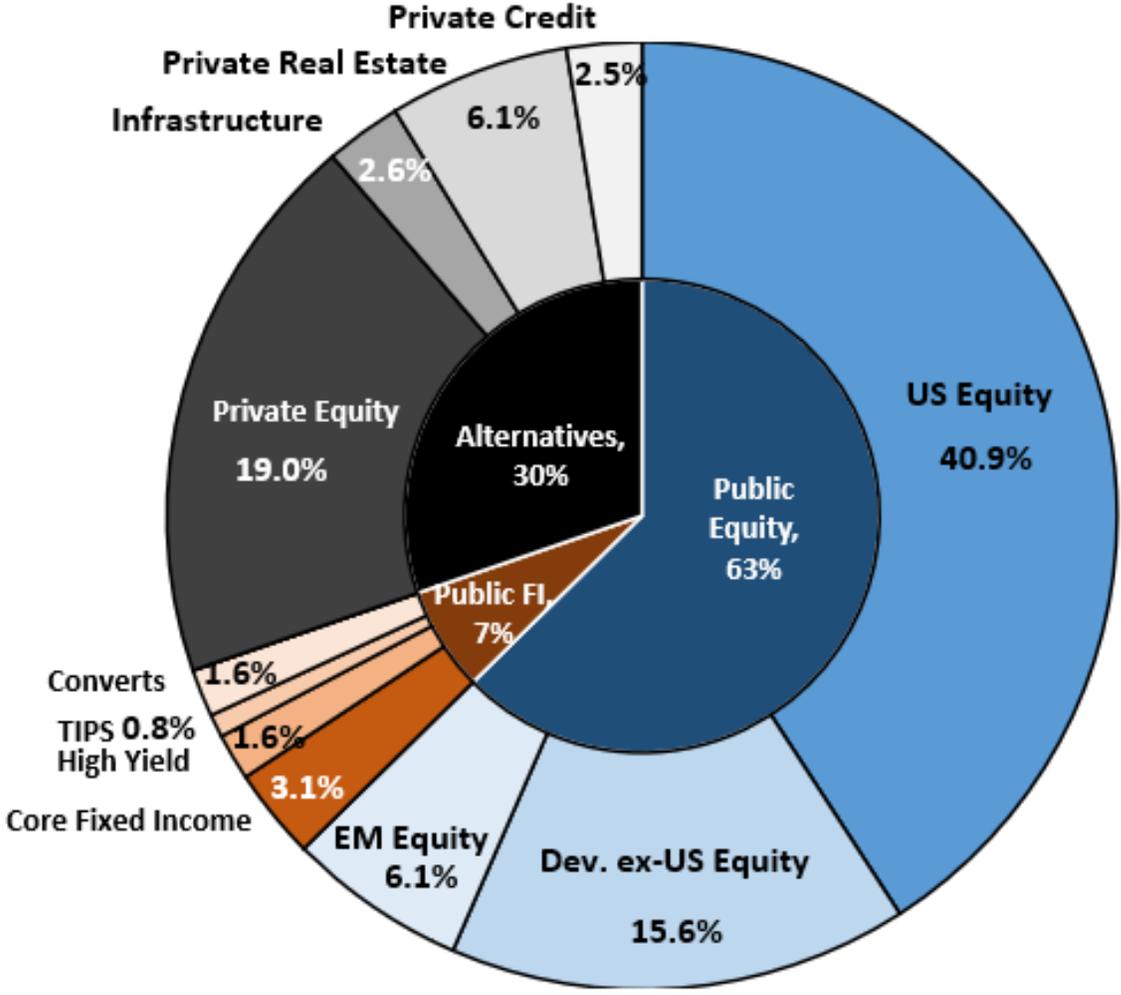


NYCERS: TWO VIEWS OF ALLOCATION

1. Asset Allocation

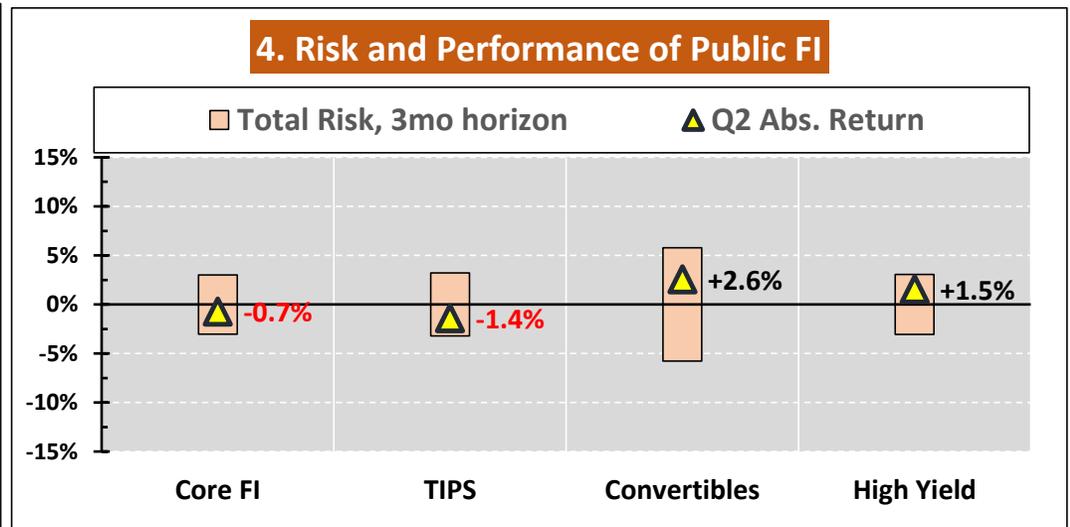
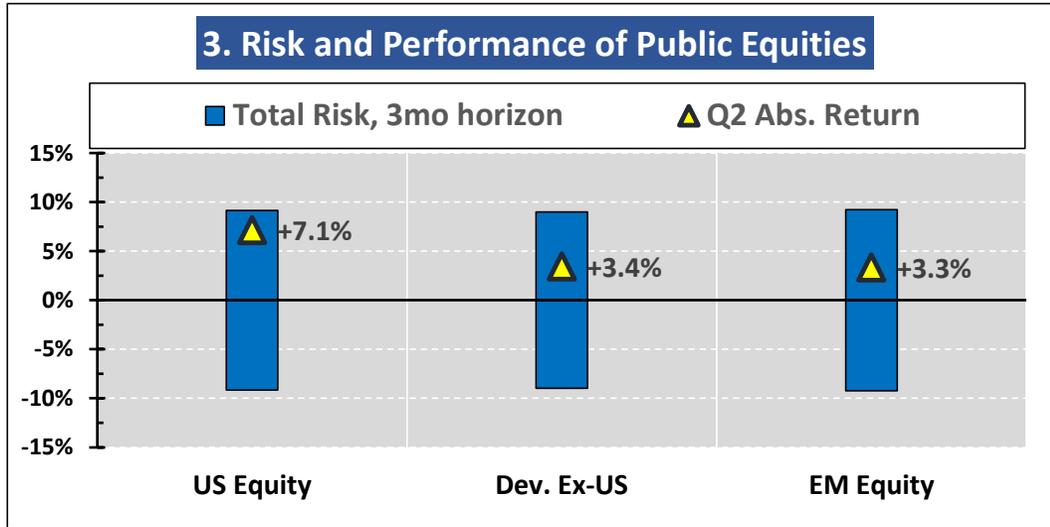
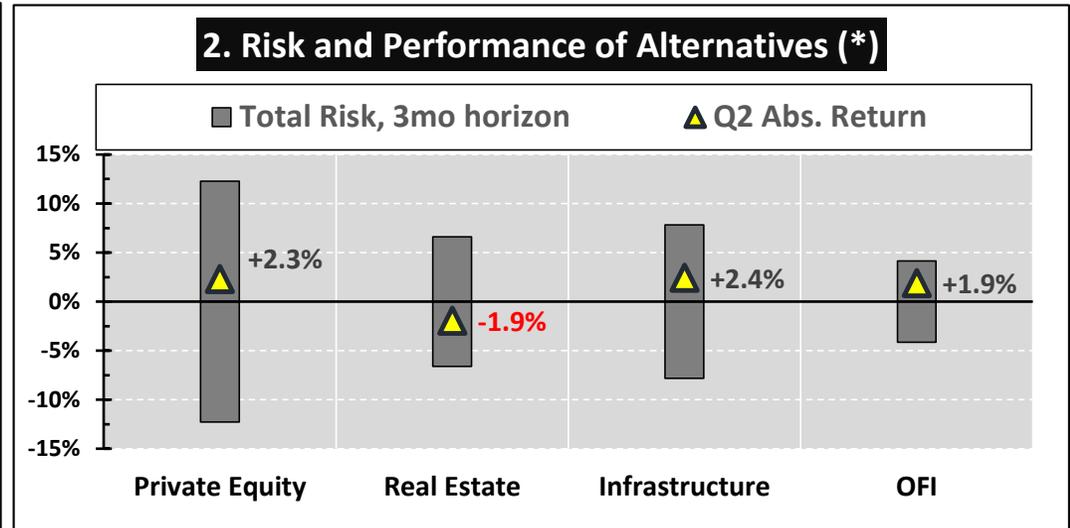
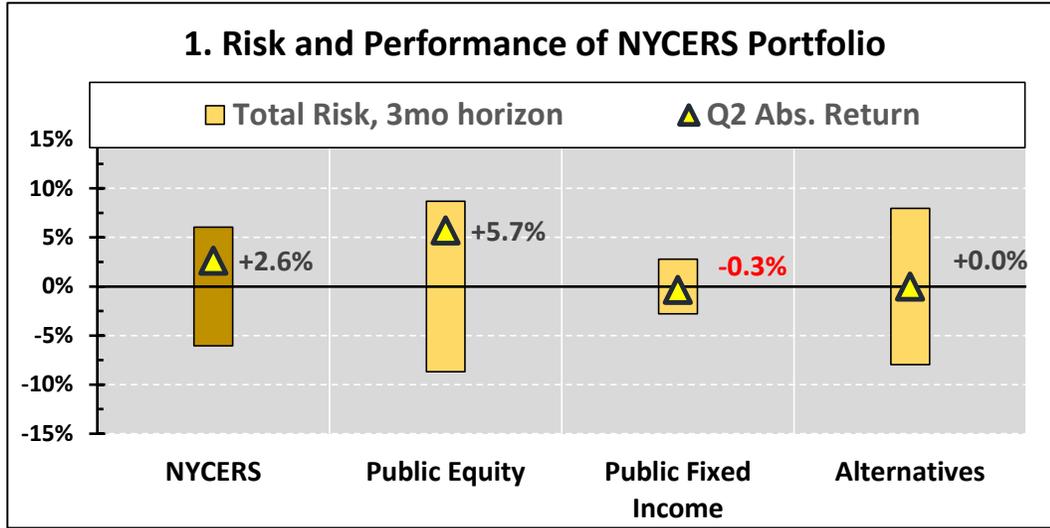


2. Risk Allocation



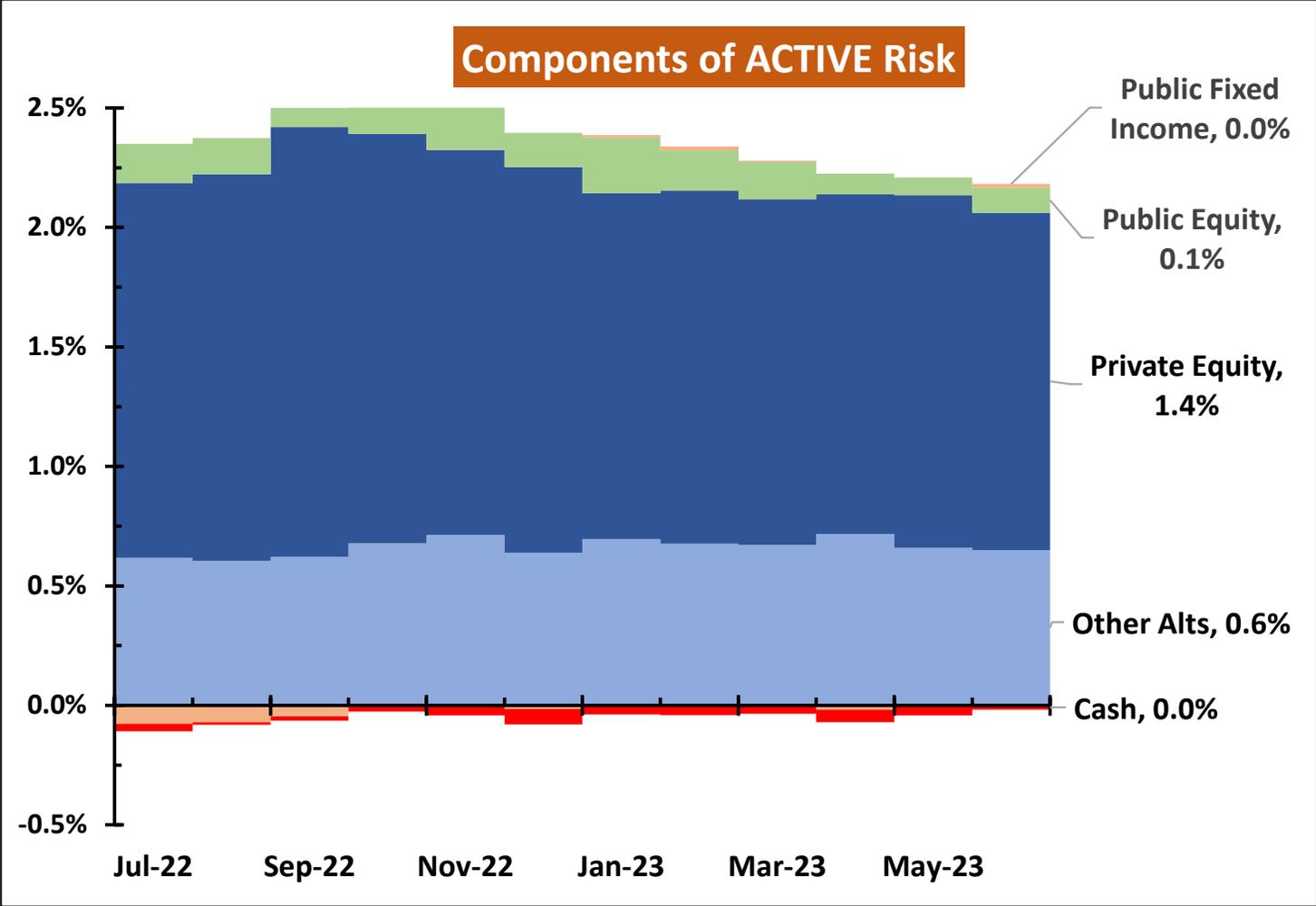
NYCERS: TOTAL RISK AND RETURN

How does 3mo Total Risk forecast compare to the Q2 Total Returns?



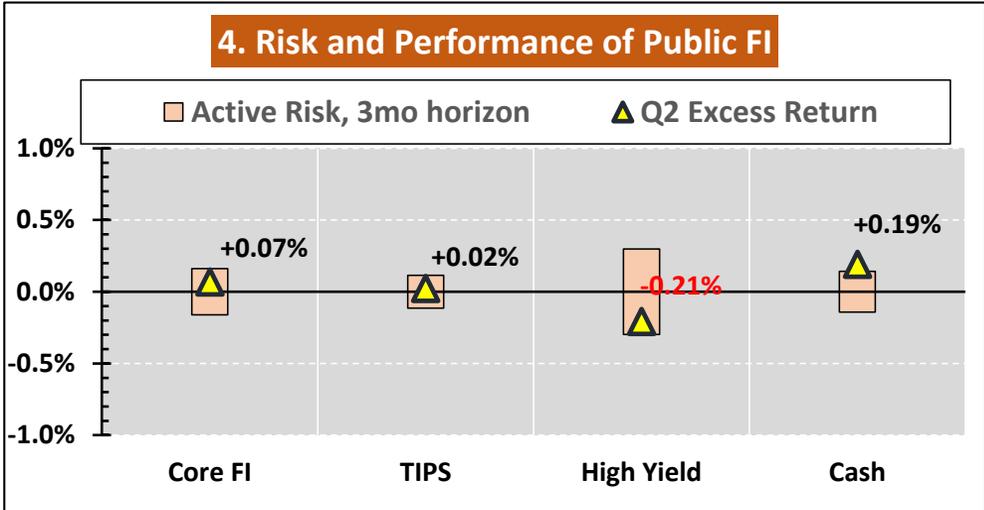
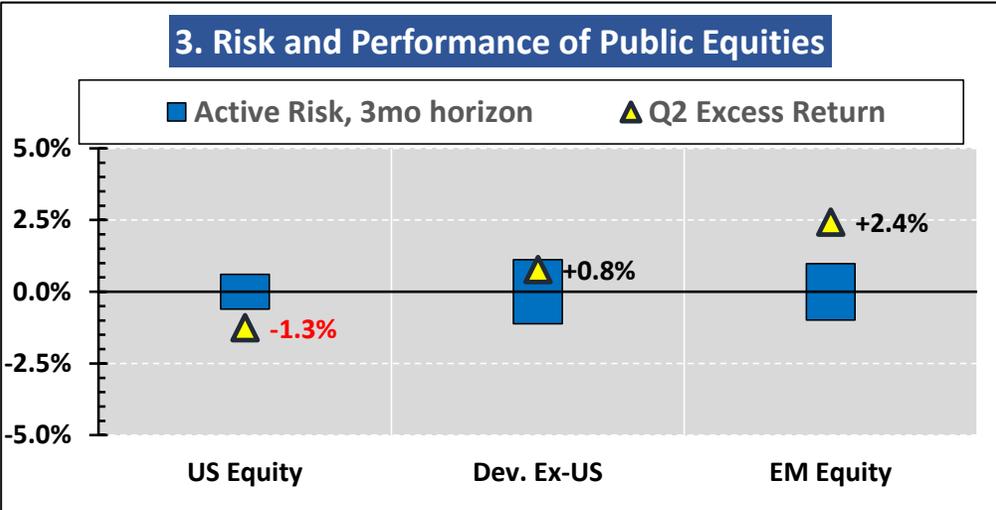
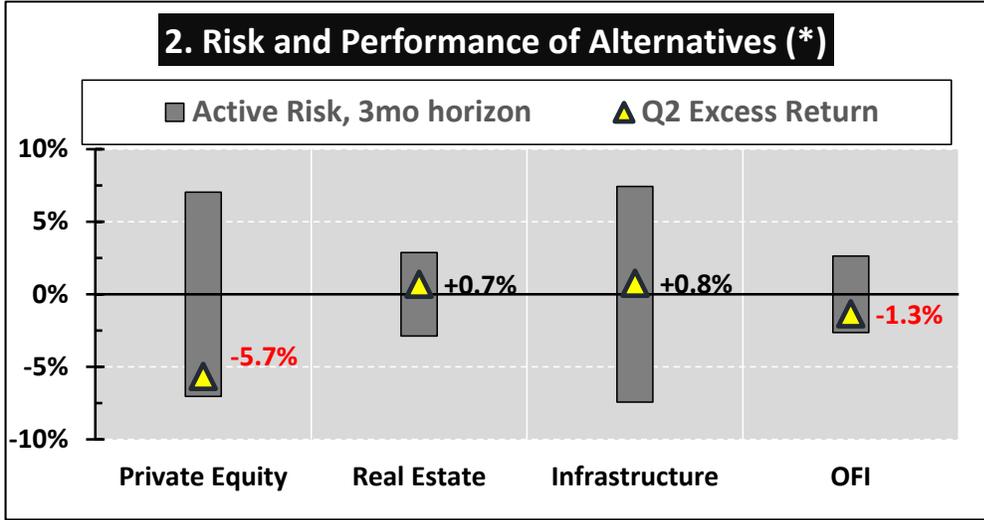
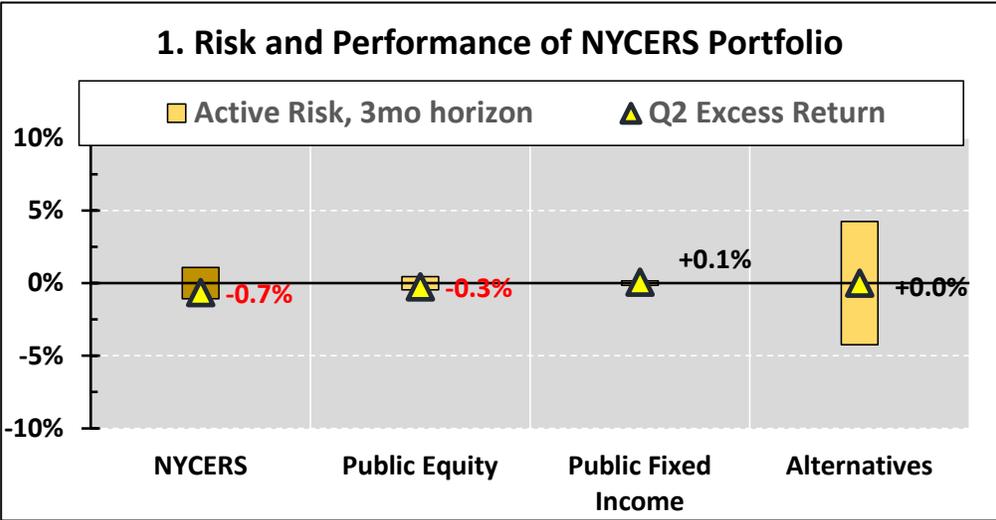
NYCERS: ACTIVE RISK

What are the contributors to **Active Risk**?



NYCERS: ACTIVE RISK AND EXCESS RETURN

How does 3mo **Active Risk** forecast compare to the Q2 **Excess Returns**?



FORWARD-LOOKING MARKETS: WORST MONTHLY SHOCK

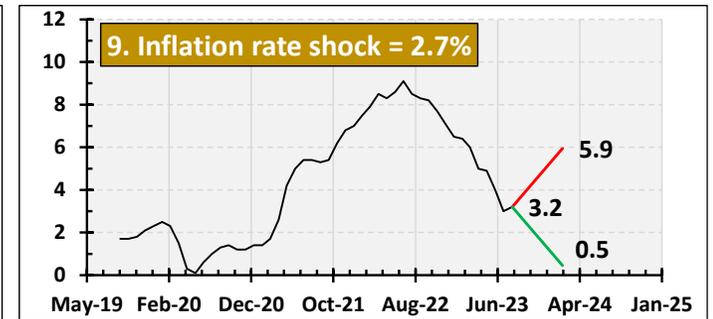
Equities



Rates



Commodities



NYCERS: FORWARD-LOOKING PERFORMANCE

How will the portfolio perform under the worst monthly market shock?

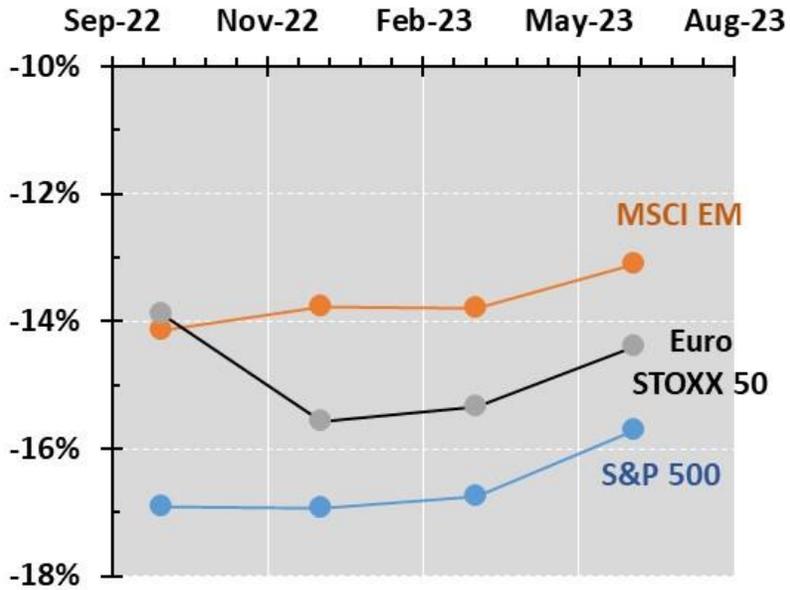
				1. Absolute Return		2. Excess Return	
Market Factors			Shock, %	Risk On	Risk Off	Risk On	Risk Off
Equities	1. S&P 500	Price	+25.1%	15.8%	-15.7%	+1.1%	-1.1%
	2. MSCI EM	Price	+25.5%	13.2%	-13.1%	+1.0%	-1.0%
	3. Euro STOXX 50	Price	+29.6%	14.5%	-14.4%	+1.3%	-1.3%
Rates	4. 2yr Treasury	Yield	-1.4%	1.1%	-0.9%	-0.1%	+0.2%
	5. 10yr Treasury	Yield	-1.6%	2.6%	-2.3%	-0.0%	+0.1%
	6. EUR/USD	Rate	+10.2%	6.7%	-6.7%	+0.7%	-0.7%
Commodities	7. Copper	Price	+33.3%	7.1%	-7.1%	+0.6%	-0.6%
	8. Oil	Price	+56.3%	4.7%	-4.7%	+0.4%	-0.4%
	9. Inflation	Rate	+2.7%	5.5%	-5.4%	+0.4%	-0.4%



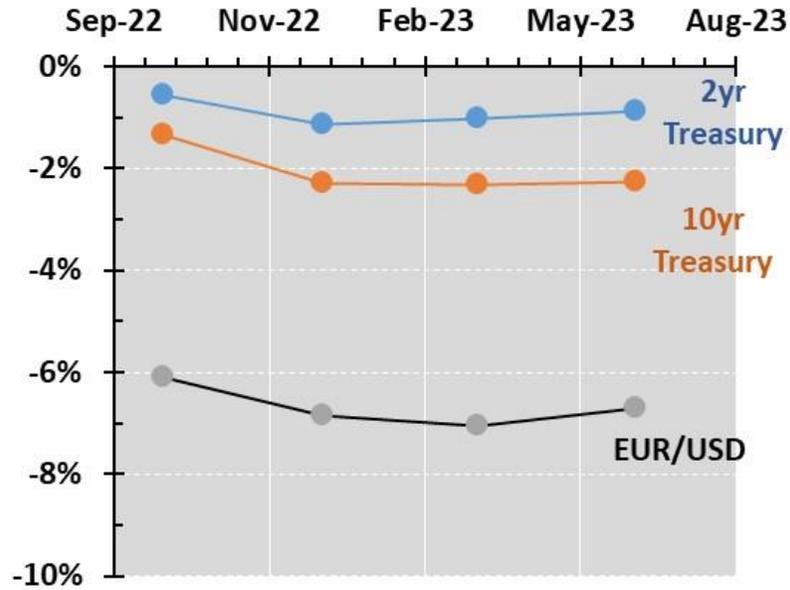
NYCERS: FORWARD-LOOKING PERFORMANCE

How did the "Worst Monthly Loss" evolve over time?

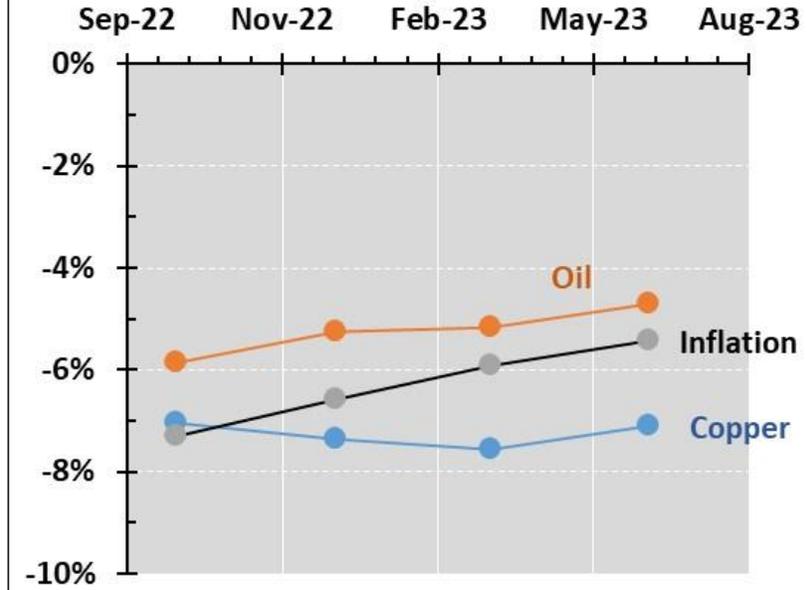
1. Worst Monthly Loss for the Equity Stress Test



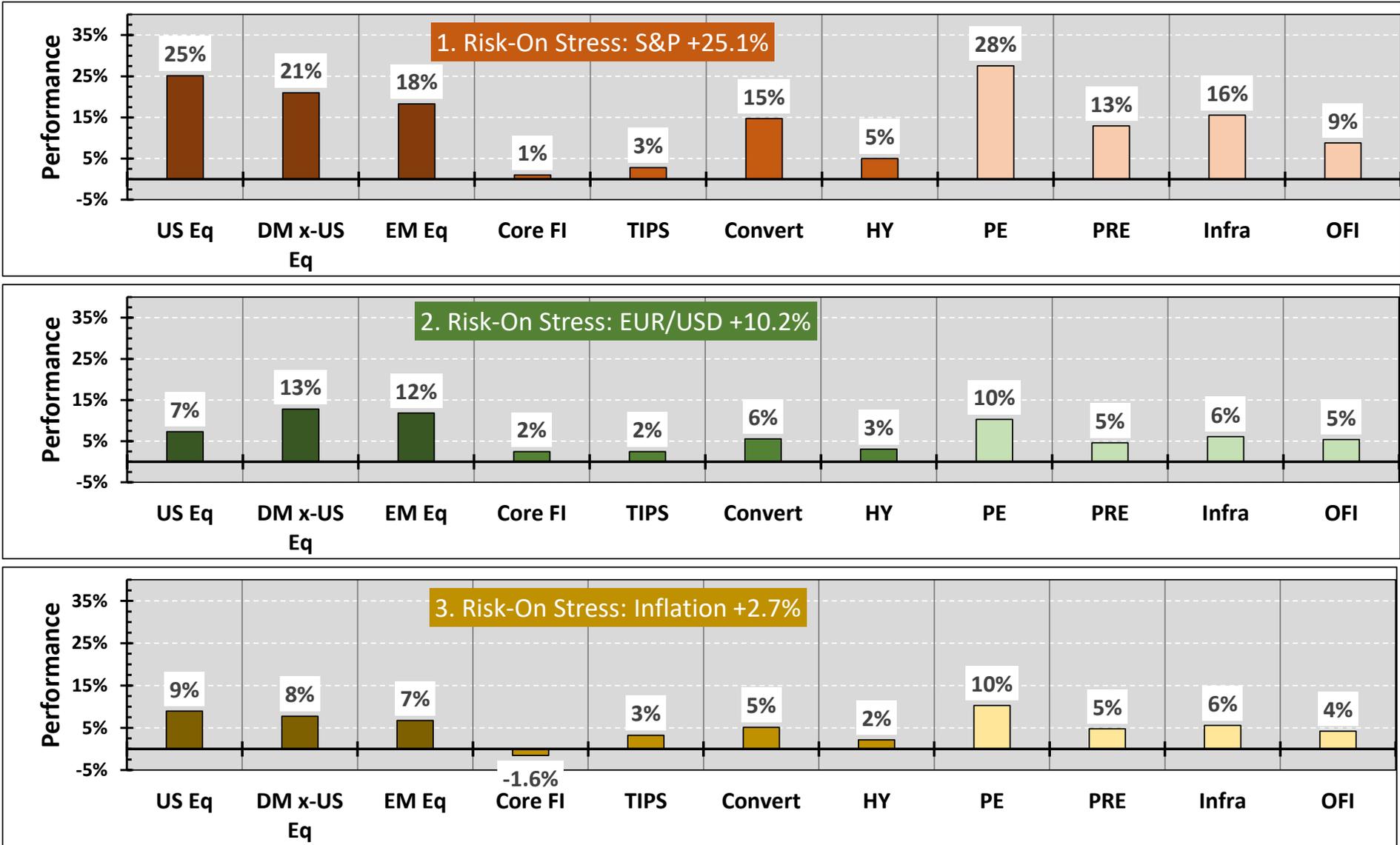
2. Worst Monthly Loss for the Rates Stress Test



3. Worst Monthly Loss for the Commodities Stress Test



NYCERS: FORWARD-LOOKING PERFORMANCE



Strategic Asset Allocation Discussion:



September 2023

Board of Trustees

2023 Asset Allocation

Bud Pellecchia

Fund Sponsor Consulting

Tom Shingler

Fund Sponsor Consulting

Kevin Machiz, CFA, FRM

Capital Markets Research

Important Disclosures regarding the use of this document are included at the end of this document. These disclosures are an integral part of this document and should be considered by the user.

Executive Summary

The purpose of the asset allocation review is to select an appropriate asset mix

Callan and Staff collaborated with alternatives consultant StepStone to create custom Capital Market Assumptions for NYCERS

- While StepStone provided input on relative returns and risks between individual strategies that comprise the underlying asset classes, the final assumption set was designed by Callan to work reasonably as a set

During the process, Callan and Staff refined 18 different alternative asset mixes of varying expected returns, expected risks, and levels of complexity

Callan and Staff present a Recommended Mix that increases expected return, but simplifies the asset allocation by eliminating TIPS and moving Convertible Bonds into High Yield

- Alternative mixes that are more conservative and more aggressive are shown for comparison
- An additional alternative mix is shown that considers keeping Convertible Bonds within the asset allocation
 - Callan supports merging Convertible Bonds into High Yield because High Yield historically exhibited relatively lower correlation to public equities even when returns were relatively similar to Convertible Bonds
 - Allocating relatively greater amounts to Convertible Bonds could also present challenges as the asset class is relatively small and exhibits greater industry and issuer concentrations

Setting Strategic Asset Allocation Policy

The cornerstone of a prudent process for pension plan fiduciaries is a careful and thorough examination of their long-term strategic plan

- Asset allocation (AA) is the single most important decision fiduciaries make with regard to investment policy
 - ▶ AA is the primary determinant of the expected level of return, and AA defines the range of potential results or volatility of the investment program. This evaluation of volatility includes the potential to experience drawdowns in the capital markets
- Asset allocation policy acknowledges the goals and risk tolerance for the investor and aligns these goals to potential outcomes for both the policy target and potential alternative asset mixes
- AA process:
 - ▶ Explicitly acknowledge change and uncertainty in the capital markets
 - ▶ Establish reasonable rate-of-return and risk expectations for individual investments
 - ▶ Establish reasonable rate-of-return and risk expectations for investment portfolios
 - ▶ Confirm an investment policy to meet return and risk objectives in relation to goals

Why Make Capital Markets Projections?

Guiding objectives and process

Cornerstone of a prudent process is a long-term strategic investment plan

- ▶ Capital markets projections are key elements—set reasonable return and risk expectations for the appropriate time horizon
- ▶ Projections represent our best thinking regarding the long-term (10-year) outlook, recognizing our median projections represent the midpoint of a range, rather than a specific number
- ▶ Develop results that are readily defensible both for individual asset classes and for total portfolios
- ▶ Be conscious of the level of change suggested in strategic allocations for long-term investors: DB plan sponsors
- ▶ Reflect common sense and recent market developments, within reason

Callan's forecasts are informed by current market conditions, but are not built directly from them

- ▶ Balance recent, immediate performance and valuation against long-term equilibrium expectations

How Are Capital Markets Projections Constructed?

Guiding objectives and process

Underlying beliefs guide the development of the projections

- ▶ An initial bias toward long-run averages
- ▶ A conservative bias
- ▶ An awareness of risk premiums
- ▶ A presumption that markets are ultimately clear and rational

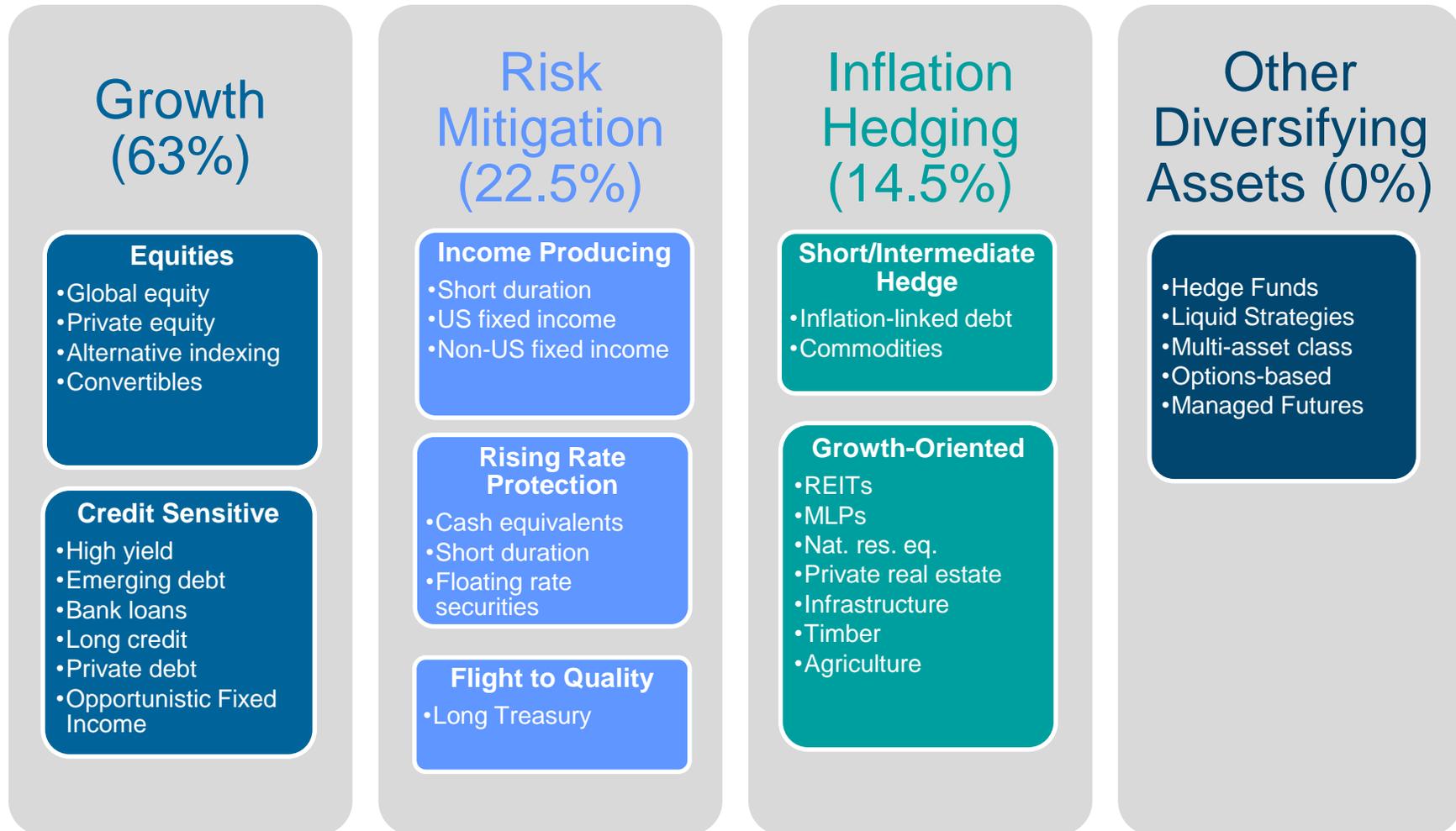
Reflect our beliefs that long-term equilibrium relationships between the capital markets and lasting trends in global economic growth are key drivers to setting capital markets expectations

Long-term compensated risk premiums represent “beta”—exposure to each broad market, whether traditional or “exotic,” with limited dependence on successful realization of alpha

The projection process is built around several key building blocks

- ▶ Advanced modeling at the individual asset class level (e.g., a detailed bond model, an equity model)
- ▶ A path for interest rates and inflation
- ▶ A cohesive economic outlook
- ▶ A framework that encompasses Callan beliefs about the long-term operation and efficiencies of the capital markets

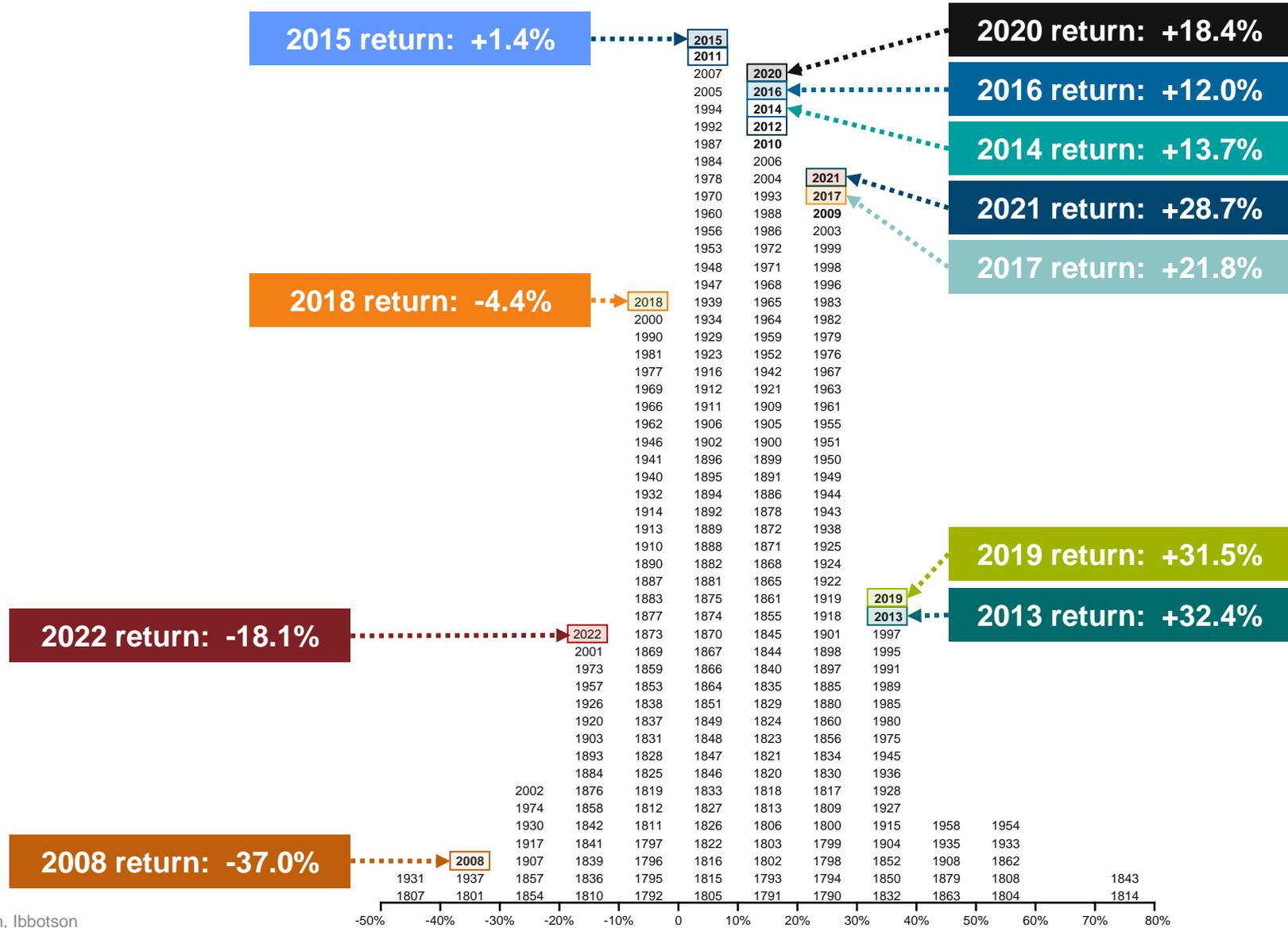
Role of Asset Classes



Strategic asset allocation typically focuses on broad asset classes

Stock Market Returns by Calendar Year

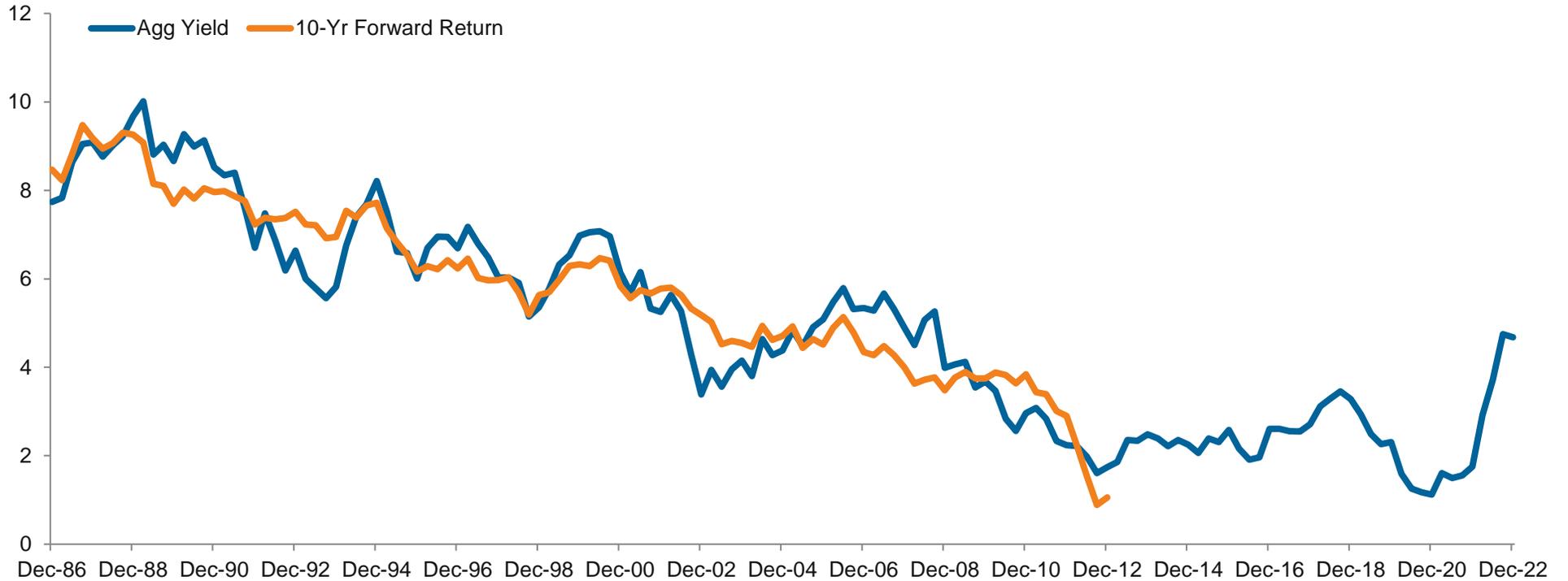
Variability of year-to-year outcomes indicates risk



Sources: Callan, Ibbotson

Starting Yield Strongly Predicts Forward Returns

Bloomberg Aggregate Index Starting Yield vs. 10-Year Forward Return



- ▶ There is a strong relationship between starting yields and subsequent 10-Year returns
- ▶ Yield on the Bloomberg Aggregate Index was 4.68% as of December 31, 2022

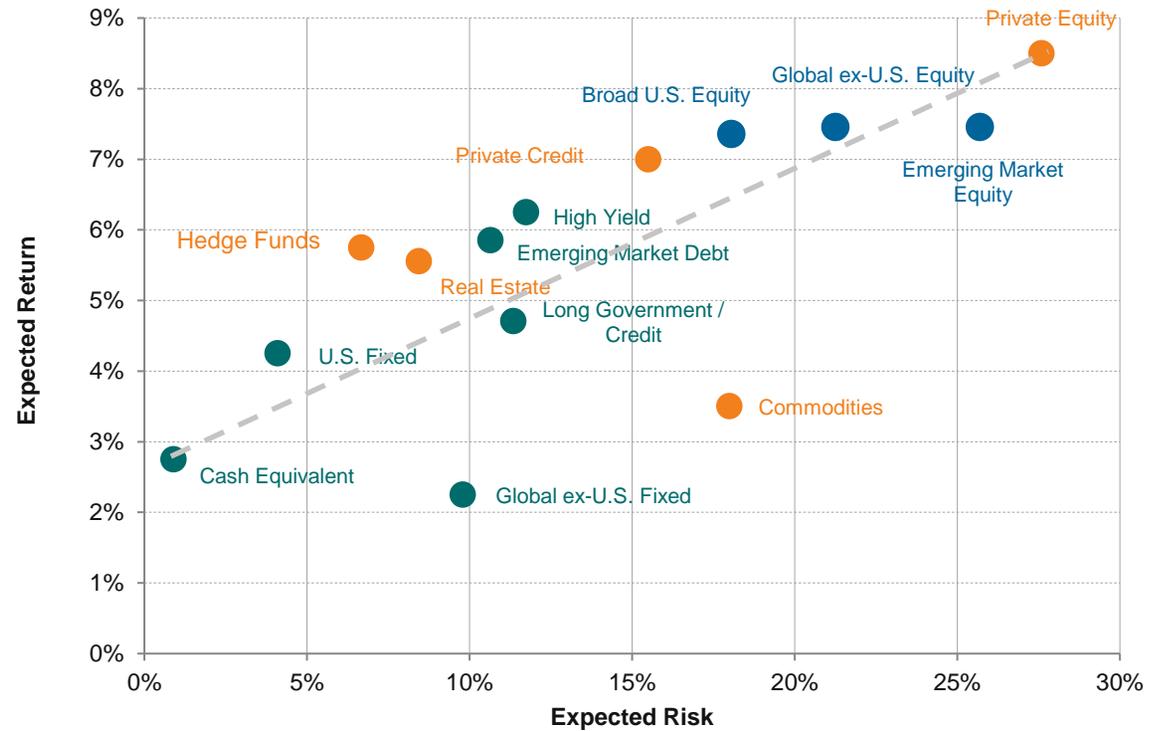
Source: Bloomberg

Risk Aversion

Visualizing Callan's 2023-2032 capital markets assumptions

Modern portfolio theory assumes investors are risk averse – given a choice between two assets with the same level of return, an investor will select the asset with a lower level of risk.

- ▶ The risk premium demanded by investors provides evidence of risk aversion
- ▶ For example, investors demand a greater return from equities over bonds for the increased risk they are assuming



Source: Callan 2023-2032 return-risk capital markets assumptions. Standard assumptions shown above, not customized CMAs for NYCERS.

Callan's 2023 Capital Market Assumptions vs. 2022

Key observations

Inflation raised to 2.5% from 2.25%

Cash projection raised to 2.75% from 1.2%

Core fixed income projection raised to 4.25% from 1.75%

Public equity projections raised by 0.55%-0.75% depending on asset class; equity risk premium over both cash and fixed income narrowed

Private markets returns raised commensurate with public equity, with the exception of real estate, whose return we held constant from 2022

Capital Market Assumptions: Return/Risk, 10-Year Horizon (2023-2032)

BAM specific-projections developed in cooperation with Staff and StepStone

- NYCERS Infrastructure
- NYCERS Real Estate (Core and Non-Core)
- NYCERS Private Equity

Other custom assumptions

- Convertible Bonds
- Opportunistic Fixed Income

Asset Class	Index	Expected Return	Standard Deviation	
Equities				
Broad U.S. Equity	Russell 3000	7.35%	18.05%	
Large Cap U.S. Equity	S&P 500	7.25%	17.75%	
Small/Mid Cap U.S. Equity	Russell 2500	7.45%	22.15%	
Global ex-U.S. Equity	MSCI ACWI ex USA	7.45%	21.25%	
Developed ex-U.S. Equity	MSCI World ex USA	7.24%	20.15%	
Emerging Market Equity	MSCI Emerging Markets	7.45%	25.70%	
Fixed Income				
Core U.S. Fixed	Bloomberg Barclays Aggregate	4.25%	4.10%	
High Yield	Bloomberg High Yield	6.25%	11.75%	
TIPS	Bloomberg Barclays US TIPS	4.00%	5.30%	
NYCERS Convertible Bonds	Custom	6.45%	10.80%	
Alternatives				
Private Infrastructure	MSCI GI Infra/FTSE Dev Core 50/50	6.15%	15.45%	
Core Real Estate	NCREIF ODCE	5.75%	14.20%	
Private Equity	Cambridge Private Equity	8.50%	27.60%	
Private Credit	Model	7.00%	15.50%	
NYCERS Infrastructure	Custom	7.10%	15.15%	
NYCERS Real Estate	Custom	7.50%	17.25%	
NYCERS Private Equity	Custom	10.00%	27.80%	
Opportunistic Fixed Income	Custom	8.45%	21.20%	
Cash Equivalents		90-Day T-Bill	2.75%	0.90%
Inflation		CPI-U	2.50%	1.60%

Capital Market Assumptions: Correlation

Correlation measures the degree to which two investments move in relation to each other

+1 correlation:

- ▶ Returns are “perfectly correlated” or synchronized
- ▶ No diversification benefit or reduction in volatility

0 correlation:

- ▶ The relationship between the returns of two investments is completely random
- ▶ Substantial reduction in volatility

-1 correlation:

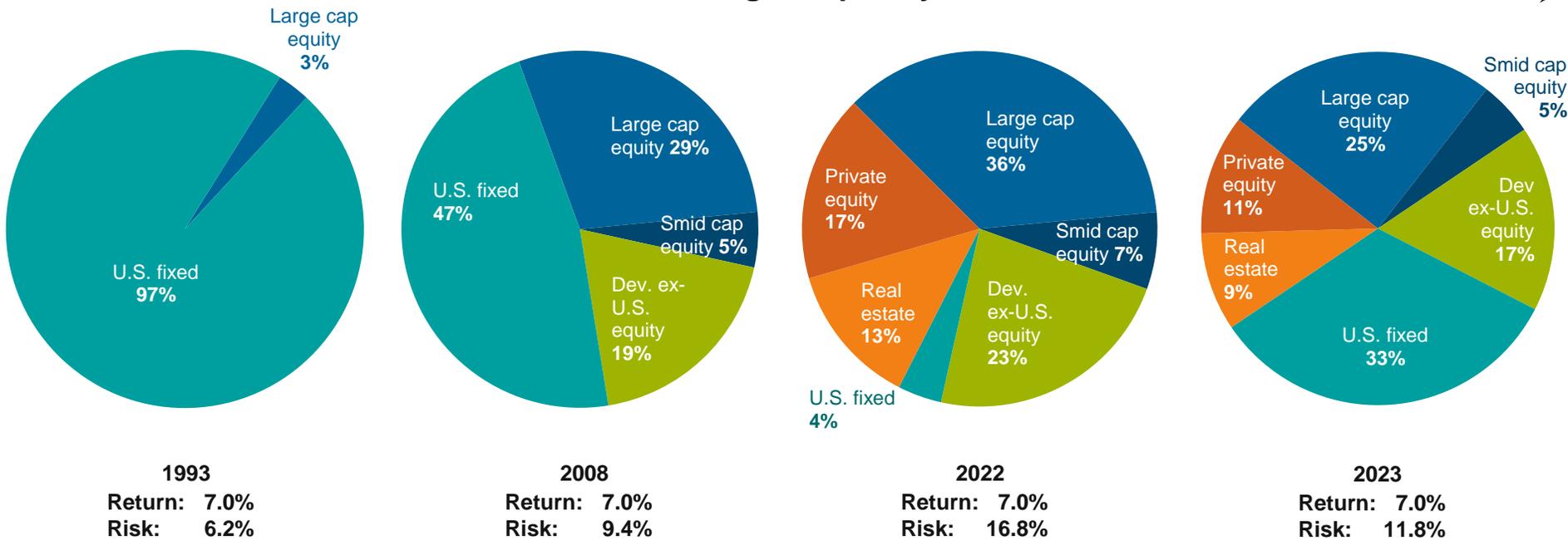
- ▶ Returns are completely unsynchronized
- ▶ Good and bad returns exactly cancel out, leaving no volatility

Fixed income has a very low correlation with equities, which makes it an excellent portfolio diversifier

	Broad US Equity	Global ex-US Equity	Core US Fixed	High Yield	TIPS	NYCERS Converts	NYCERS Infrastructure	NYCERS RE	NYCERS PE	NYCERS OFI	Cash Equivalents	Inflation
Broad US Equity	1.00											
Global ex-US Equity	0.80	1.00										
Core US Fixed	0.02	(0.01)	1.00									
High Yield	0.76	0.76	0.09	1.00								
TIPS	(0.07)	(0.10)	0.70	0.02	1.00							
NYCERS Converts	0.98	0.76	0.17	0.75	0.04	1.00						
NYCERS Infrastructure	0.67	0.65	0.09	0.50	0.03	0.67	1.00					
NYCERS RE	0.73	0.71	0.02	0.54	(0.03)	0.71	0.90	1.00				
NYCERS PE	0.80	0.78	(0.09)	0.61	(0.11)	0.77	0.82	0.91	1.00			
NYCERS OFI	0.83	0.81	(0.07)	0.66	(0.12)	0.80	0.78	0.87	0.98	1.00		
Cash Equivalents	(0.06)	(0.10)	0.15	(0.09)	0.12	(0.04)	(0.03)	0.00	0.00	(0.01)	1.00	
Inflation	(0.01)	0.01	(0.23)	0.00	0.25	(0.05)	0.09	0.14	0.06	0.03	0.05	1.00

7% Expected Returns Over Past 30 Years

Increasing Complexity



Increasing Risk

In 1993, our return expectation for broad U.S. fixed income was 6.85%.

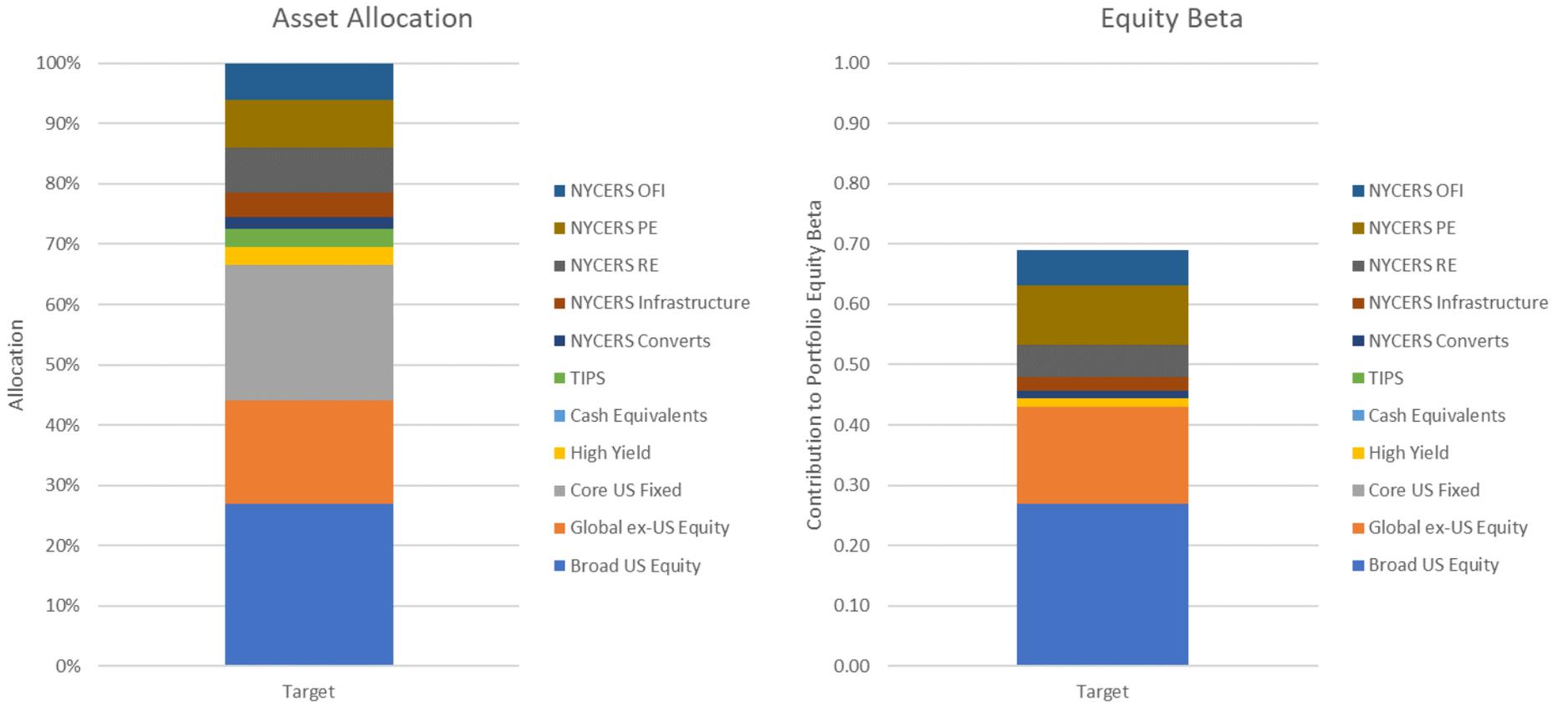
Just 3% in return-seeking assets was required to earn a 7% projected return.

15 years later, an investor would have needed over half of the portfolio in public equities to achieve a 7% projected return.

In 2022 an investor was required to include 96% in return-seeking assets (including 30% in private market investments) to earn a 7% projected return at almost 3x the volatility compared to 1993.

Today's 7% expected return portfolio is much more reasonable than it was just a year ago, with a third in fixed income and a correspondingly lower level of risk.

Equity Beta



Equity Beta is a useful metric because it captures both direct exposure to equity and indirect or “hidden” exposure across the portfolio

- The Current Target’s Equity Beta of 0.69 indicates that in an environment where equities decline 10%, you would expect the portfolio to decline 6.9%

Scenario described above assumes a hypothetical instantaneous decline.

Asset Allocation Constraints

Basket Clause

- Non-US Equity > 10%
- Real Assets > 10%
- Non-Investment Grade
 - 20% of High Yield
 - 95% of OFI
 - The sum of the remaining assets net of the above levels over 10% of total assets are also included in the basket
- 100% of Private Equity

Other Constraints

- High Yield: minimum 5%
- TIPS: minimum 2% (if included)
- Convertible Bonds: 2% (if included)
- Infrastructure: minimum 2%
- Real Estate: minimum 5.5%
- Private Equity: minimum 6%
- Opportunistic Fixed Income: minimum 4%
- No Hedge Funds

Alternative Mixes

						Difference vs. Current Target		
	Target	Actual Allocation	Conservative	Recommended	Aggressive	Conservative	Recommended	Aggressive
Broad US Equity	27.0	28.0	21.0	24.5	27.0	-6.0	-2.5	0.0
Global ex-US Equity	17.0	16.9	14.0	16.5	18.0	-3.0	-0.5	1.0
Core US Fixed	22.5	20.9	35.0	24.5	16.5	12.5	2.0	-6.0
High Yield	3.0	4.1	5.0	5.0	6.0	2.0	2.0	3.0
Cash Equivalents	0.0	0.4	0.5	0.5	0.5	0.5	0.5	0.5
TIPS	3.0	3.3	0.0	0.0	0.0	-3.0	-3.0	-3.0
NYCERS Converts	2.0	1.8	0.0	0.0	0.0	-2.0	-2.0	-2.0
NYCERS Infrastructure	4.0	2.4	3.5	4.5	5.0	-0.5	0.5	1.0
NYCERS RE	7.5	7.3	7.0	8.0	8.0	-0.5	0.5	0.5
NYCERS PE	8.0	10.5	8.5	10.0	11.5	0.5	2.0	3.5
NYCERS OFI	6.0	4.4	5.5	6.5	7.5	-0.5	0.5	1.5
Totals	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0
10 Yr. Geometric Mean Return	7.41	7.49	7.14	7.50	7.75	-0.27	0.09	0.34
Projected Standard Deviation	13.23	13.56	11.57	13.46	14.89	-1.67	0.22	1.66
10 Yr. Simulated Sharpe Ratio	0.34	0.34	0.37	0.34	0.33	0.03	0.00	-0.02
Public Equity	44.0	44.9	35.0	41.0	45.0	-9.0	-3.0	1.0
Illiquid	25.5	24.6	24.5	29.0	32.0	-1.0	3.5	6.5
Basket	21.8%	22.7%	18.6%	23.7%	27.7%	-3.2%	1.9%	5.9%
Equity Beta	0.69	0.71	0.60	0.69	0.77	-0.09	0.01	0.08

Alternative Mixes: a Recommended Mix, as well as a more conservative and a more aggressive mix shown

- Higher expected return and risk mixes contain lower allocations to Core US Fixed Income
- Callan and Staff support the Recommended Mix that increases expected return, but simplifies the asset allocation by eliminating TIPS and moving Convertible Bonds into High Yield

Actual Allocation, as of 6/30/2023.

Additional Alternative Mix: Convertible Bonds

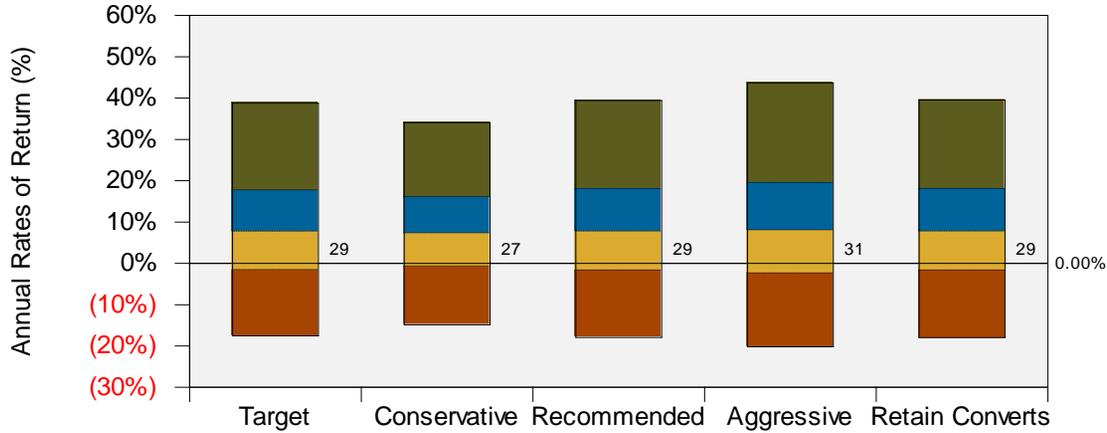
	Target	Retain Converts	Difference
Broad US Equity	27.0	23.5	-3.5
Global ex-US Equity	17.0	16.5	-0.5
Core US Fixed	22.5	23.5	1.0
High Yield	3.0	5.0	2.0
Cash Equivalents	0.0	0.5	0.5
TIPS	3.0	0.0	-3.0
NYCERS Converts	2.0	2.0	0.0
NYCERS Infrastructure	4.0	4.5	0.5
NYCERS RE	7.5	8.0	0.5
NYCERS PE	8.0	10.0	2.0
NYCERS OFI	6.0	6.5	0.5
Totals	100.0	100.0	0.0
10 Yr. Geometric Mean Return	7.41	7.50	0.09
Projected Standard Deviation	13.23	13.49	0.25
10 Yr. Simulated Sharpe Ratio	0.34	0.34	0.00
Public Equity	44.0	40.0	-4.0
Illiquid	25.5	29.0	3.5
Basket	21.8%	23.6%	1.8%
Equity Beta	0.69	0.70	0.01

An additional alternative mix is shown that considers keeping Convertible Bonds within the asset allocation

- Eliminating Convertible Bonds would simplify the asset allocation without a meaningful difference in expected return and expected risk compared to retaining Convertible Bonds

Range of Projected Returns (1-Yr Horizon)

Range of Projected Rates of Return
 Projection Period: 1 Year
 Optimization Set: 2023 Expanded



	Target	Conservative	Recommended	Aggressive	Retain Converts
2.5th Percentile	38.8%	34.1%	39.4%	43.7%	39.5%
25th Percentile	17.6%	15.9%	17.8%	19.3%	17.9%
Median	7.5%	7.2%	7.6%	7.9%	7.6%
75th Percentile	(1.7%)	(0.8%)	(1.8%)	(2.5%)	(1.8%)
97.5th Percentile	(17.6%)	(14.9%)	(17.9%)	(20.2%)	(18.0%)
Prob < 0.00%	29%	27%	29%	31%	29%

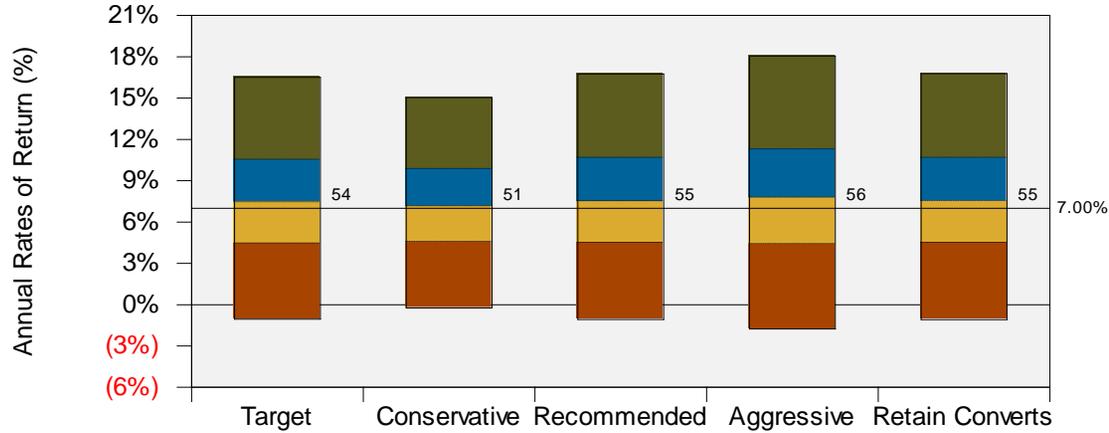
Higher expected return is associated with a better outcome in the median (50th percentile) case

Higher risk is associated with a lower return in a worse-case outcome (97.5th percentile, about a one in forty chance of occurrence)

Higher risk is associated with a slightly higher chance of delivering a negative return in any given year

Range of Projected Returns (10-Yr Horizon)

Range of Projected Rates of Return
 Projection Period: 10 Years
 Optimization Set: 2023 Expanded



	Target	Conservative	Recommended	Aggressive	Retain Converts
2.5th Percentile	16.5%	15.0%	16.8%	18.1%	16.8%
25th Percentile	10.5%	9.8%	10.6%	11.2%	10.6%
Median	7.4%	7.1%	7.5%	7.7%	7.5%
75th Percentile	4.4%	4.5%	4.5%	4.4%	4.5%
97.5th Percentile	(1.0%)	(0.2%)	(1.1%)	(1.8%)	(1.1%)
Prob > 7.00%	54%	51%	55%	56%	55%

Higher expected return is associated with a better outcome in the median (50th percentile) case

Higher risk is associated with a lower return in a worse-case outcome (97.5th percentile, about a one in forty chance of occurrence)

Higher expected return is associated with a slightly higher chance of reaching the 7% actuarial discount rate over 10 years

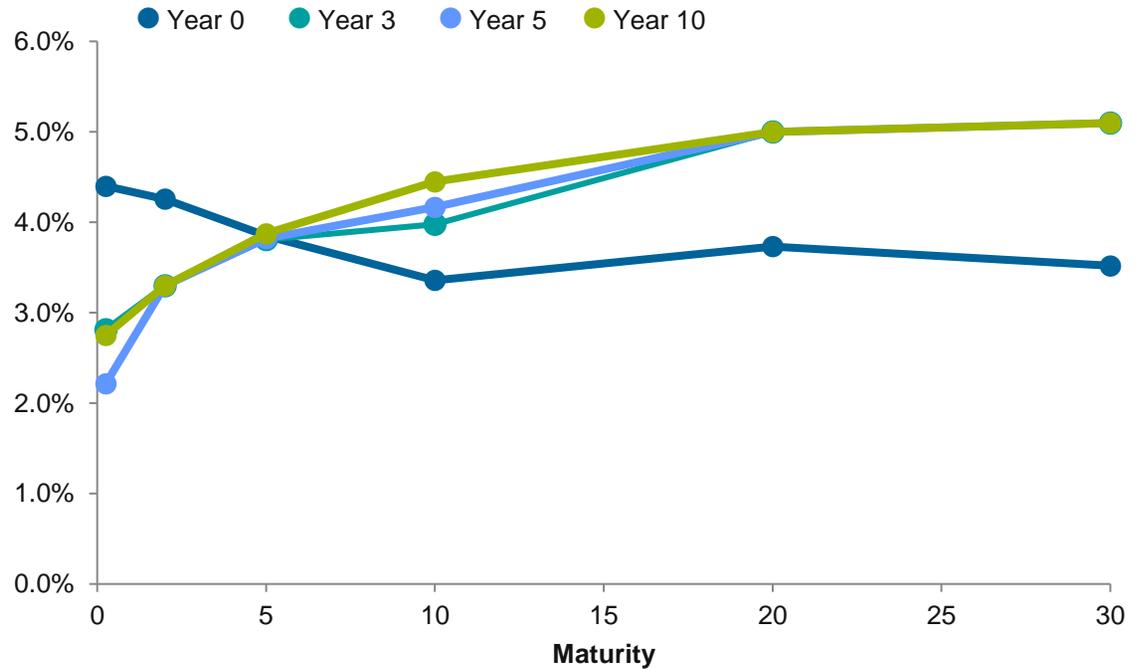
Appendix

Shape of Yield Curve at Different Points in Forecast Horizon

Our forecast has the yield curve steepening within the first few years

With yields already high, we expect yields to reach equilibrium by year 10 of our forecast (vs. year 30 in prior forecasts)

Yield Curve Forecast



	3 Month	2 Year	5 Year	10 Year	20 Year	30 Year
Forecast Year 0	4.40	4.26	3.85	3.36	3.73	3.52
Forecast Year 3	2.82	3.30	3.81	3.98	5.00	5.10
Forecast Year 5	2.22	3.30	3.82	4.17	5.00	5.10
Forecast Year 10 (Equilibrium Reached)	2.75	3.30	3.88	4.45	5.00	5.10

Source: Callan

10-Year Expected Returns

	Income Return	+	Capital Gain/Loss	+	Credit Default	+	Roll Return	=	2023 Expected Return	Prelim 2023 Expected Return	Change vs 2023 Prelim	2022 Expected Return	Change vs 2022
Cash	2.75%		0.00%		0.00%		0.00%		2.75%	2.40%	0.35%	1.20%	1.55%
1-3 Year G/C	3.45%		0.20%		-0.10%		0.25%		3.80%	3.20%	0.60%	1.50%	2.30%
1-3 Year Government	3.15%		0.20%		0.00%		0.25%		3.60%	3.10%			
1-3 Year Credit	3.85%		0.10%		-0.20%		0.25%		4.00%	3.40%			
Intermediate Gov/Credit	3.95%		0.00%		-0.10%		0.25%		4.10%	3.60%	0.50%	1.70%	2.40%
Intermediate Gov	3.65%		0.10%		0.00%		0.25%		4.00%	3.40%			
Intermediate Credit	4.50%		-0.10%		-0.40%		0.25%		4.25%	3.90%			
Aggregate	4.30%		-0.20%		-0.10%		0.25%		4.25%	3.90%	0.35%	1.75%	2.50%
Government	3.80%		-0.10%		0.00%		0.25%		3.95%	3.60%			
Securitized	4.00%		0.00%		0.00%		0.25%		4.25%	3.90%			
Credit	5.25%		-0.40%		-0.40%		0.25%		4.70%	4.10%			
Long Duration Gov/Credit	6.15%		-1.70%		-0.30%		0.60%		4.75%	4.00%	0.75%	1.80%	2.95%
Long Government	4.90%		-1.80%		0.00%		0.60%		3.70%	3.30%			
Long Credit	6.50%		-1.50%		-0.40%		0.60%		5.20%	4.50%			
TIPS	3.95%		-0.20%		0.00%		0.25%		4.00%	3.25%	0.75%	1.25%	2.75%
Non-US Fixed (unhedged)	2.40%		-0.20%		-0.20%		0.25%		2.25%	2.00%	0.25%	0.80%	1.45%
High Yield	8.00%		0.20%		-2.20%		0.25%		6.25%	6.00%	0.25%	3.90%	2.35%
Emerging Market Debt	7.40%		0.20%		-2.00%		0.25%		5.85%	5.80%	0.05%	3.60%	2.25%
Bank Loans	7.40%		0.30%		-1.60%		0.00%		6.10%	6.10%	0.00%	4.60%	1.50%

Source: Callan

Equity Forecasts

Building blocks

Index	Current Dividend Yield*	Forecast Dividend Yield	Net Buyback Yield	Inflation	Real Earnings Growth**	Valuation Adjustment	Total Geometric Return
S&P 500	1.77%	2.00%	0.50%	2.50%	2.25%	0.00%	7.25%
Russell 2500	1.61%	1.75%	0.00%	2.50%	3.20%	0.00%	7.45%
Russell 3000	1.72%	1.95%	0.45%	2.50%	2.45%	0.00%	7.35%
MSCI World ex USA	3.21%	3.75%	0.00%	1.75%	1.75%	0.00%	7.25%
MSCI Emerging Markets	3.27%	3.55%	-2.90%	3.00%	3.80%	0.00%	7.45%
Aggregate							4.25%
Cash							2.75%

Index	Forecast ERP Cash	Historical ERP Cash^	Delta ERP Cash	Forecast ERP Bonds	Historical ERP Bonds^^	Delta ERP Aggregate
S&P 500	4.50%	7.56%	-3.06%	3.00%	4.95%	-1.95%
Russell 2500	4.70%	7.22%	-2.52%	3.20%	4.61%	-1.41%

* Index yields as of Dec. 31, 2022

** S&P 500 real earnings growth is forecast real GDP growth. R 2500 real earnings growth is 100 bps spread over S&P 500. Developed and emerging markets earnings growth in line with their respective GDP assumptions.

^ Return relative to 90-day T-bills for 40 years ended Dec. 31, 2022

^^ Return relative to the Bloomberg Aggregate for 40 years ended Dec. 31, 2022

Source: Callan

Capital Market Assumptions: Comparison of Customized Assumptions

Asset Class	Index	Expected Return	Standard Deviation
NYCERS Convertible Bonds	Custom	6.45%	10.80%
NYCERS Infrastructure	Custom	7.10%	15.15%
NYCERS Real Estate	Custom	7.50%	17.25%
NYCERS Private Equity	Custom	10.00%	27.80%
Opportunistic Fixed Income	Custom	8.45%	21.20%

Comparison to Callan Standard CMA

Asset Class	Expected Return	Difference	Standard Deviation	Difference
Core U.S. Fixed Income	4.25%	2.20%	4.10%	6.70%
Private Infrastructure	6.15%	0.95%	15.45%	-0.30%
Core Real Estate	5.75%	1.75%	14.20%	3.05%
Private Equity	8.50%	1.50%	27.60%	0.20%
Private Credit	7.00%	1.45%	15.50%	5.70%

BAM specific-projections developed in cooperation with Staff and StepStone

- NYCERS Infrastructure
- NYCERS Real Estate (Core and Non-Core)
- NYCERS Private Equity

Other custom assumptions

- Convertible Bonds
- Opportunistic Fixed Income

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Invitation to Join Labor Rights Investor
Network:

About the Labour Rights Investor Network: An Education and Exchange Platform on Freedom of Association and Collective Bargaining

What is the Labour Rights Investor Network?

The 'Labour Rights Investor Network' is a global investor network focusing on the rights to freedom of association and collective bargaining. The Network assists investors by acting as an education and exchange platform and a place to connect on issues related to freedom of association and collective bargaining.

The Network is composed of investors who commit to integrating labour rights into their stewardship practices, as outlined in the Investor Statement on the Rights to Freedom of Association and Collective Bargaining. The Network is open to asset managers, asset owners and other investment service providers.

What will the Network do?

The Coordinating Committee (detailed below) will facilitate knowledge building by providing resources and activities to meet the needs identified by members. This could include information about legal frameworks and risks related to freedom of association and collective bargaining, individual companies' practices, sector-wide risks, or relevant policy developments. In addition, the Coordinating Committee may also undertake activities to support individual members or groups of members when it is relevant to do so. Membership in the Network does not require participation in any particular activity, including any engagements. Members can opt in to chosen activities of interest.

After the initial year and as the Network progresses, the Coordinating Committee will consult with the investor members regarding the Network, including its governance structure and its activities.

Build knowledge on freedom of association and collective bargaining

The Coordinating Committee will organise the activities of the Network and provide practical resources to help advance investor knowledge of freedom of association and collective bargaining, so that investors can apply this understanding of the topic to strengthen stewardship activities.

Resources will include:

- Information about trade unions and the rights to freedom of association and collective bargaining;
- Practical workshops on responding to engagement challenges;
- Education sessions focused on particular geographies, sectors, or themes;
- Written resources that can be utilised by members in stewardship and internal engagements.

Provide information on company-level risks

The Labour Rights Investor Network will act as a platform through which members receive public information from other investors and trade unions globally regarding issues related to freedom of association and collective bargaining at specific companies or industries. The Coordinating Committee will not coordinate collaborative company engagement activities but will share and support relevant company engagement activities organised by members or other groups. The Coordinating Committee may also help support members in evaluating company statements.

Facilitate members embedding labour rights in the investment chain

Where there is member interest, the Network will support activities to incorporate freedom of association and collective bargaining throughout the investment chain. For example, the Network can facilitate sharing good practices on how to incorporate labour rights in engagement with service providers, such as ESG rating agencies or asset managers. The Network can also inform and support members participating in relevant policy consultations that shape company or investor activities in relation to freedom of association and collective bargaining.

What does it mean to be a member?

Expectations of members

By joining the Network, members commit to:

- Publicly endorse the Investor Statement on the Rights to Freedom of Association and Collective Bargaining by adding their organisation's name. This statement will be public on the Network's webpage, hosted on the Global Unions' Committee on Workers' Capital (CWC) (detailed below) website.
- Join regular Network meetings.
- Engage with the Network's resources and events.
- Work to incorporate labour rights into their engagement and stewardship activities.
- Promote labour rights and the Network itself where there are opportunities to do so.

Members are prohibited from sharing confidential, proprietary or material non-public information. If a network member inadvertently receives information believed to be material non-public information, then the requirements under the relevant securities laws apply.

Network members are invited to show leadership within the Network on the stewardship of labour rights, including leading relevant workstreams of interest. Members are encouraged to provide input into the activities of the Network.

How to join the Network?

If an investor has questions and would like to discuss the Network they should contact the Coordinating Committee detailed below.

To join the Network, the investor agrees to:

- Provide the Coordinating Committee with their organisation's current assets under management and the name and contact information of their representative for purposes of Network communications and activities. Members may be contacted by any member of the Coordinating Committee listed below.
- Act in line with and fulfil the expectations outlined in this document.
- Be listed publicly, unless an investor member requests otherwise. Assets under management will only be disclosed in aggregate.

Leaving the Network

Investors can join the Network on an ongoing basis, for an indefinite amount of time. If a member would like to leave the Network at any time, for any reason, they should contact the Coordinating Committee. The member's name will then be removed from the online version of the investor statement. Should there be a significant change in the running, structure or activities of the Network, as detailed in this document, all investor members will be consulted.

What is the governance of the Network?

The Network will be coordinated by the Global Unions' Committee on Workers' Capital (CWC), with the support of a Coordinating Committee of CWC participant organisations.

Coordinating Committee responsibilities

- Coordinate regular Network meetings for members, provide agendas and chair meetings.
- Develop and organise a programme of knowledge-sharing and capacity-building resources and activities for members by drawing on expertise and capabilities within and beyond the global trade union movement and other investor members.
- Offer interested members expertise and support on labour rights, including by drawing on a global network of labour rights experts.
- Promote the Network, including engaging with prospective members and organising opportunities for public communication. The Coordinating Committee is able to speak on behalf of the Network, but will not speak directly on behalf of individual investors or use names in communications without specific permission from the investor to do so.
- Provide space for unions and investors to exchange information related to labour rights.
- Seek input and feedback from investor members on activities and the running of the network.

Network Coordinating Committee

The following organisations are represented on the Coordinating Committee.

- **UNI Global Union** - UNI Global Union is the global trade union federation for the skills and services sectors, representing more than 20 million workers across 150 different countries. UNI Global Union's investor engagement team works with investors to support their engagement and stewardship with companies and across sub-sectors in the services sectors. UNI has also worked extensively in supporting investors to advance their knowledge, policy and practice on labour rights.
- **UFCW** - The United Food and Commercial Workers International Union (UFCW) represents 1.3 million workers in the U.S. and Canada in the food retail, food processing, and non-food retail industries. UFCW's capital stewardship department supports investor engagement with companies to drive more sustainable returns.
- **AFL-CIO** - The American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) is a federation of 60 national and international labour unions that represent 12.5 million working people. The AFL-CIO's Capital Stewardship Program seeks to ensure that retirement and employee benefit funds invested on behalf of working people are invested and managed in their long-term best interests.
- **SOC Investment Group** - The SOC Investment Group works with pension funds sponsored by unions affiliated with the Strategic Organizing Center (SOC), a coalition of unions representing millions of members, to enhance long-term shareholder value through active ownership. These funds have over \$250 billion in assets under management. The SOC Investment Group supports shareholder initiatives to ensure director accountability, sound human rights practices, and strong governance policies, reflecting the long-term interests of workers and their families invested in union pension funds.

- **CWC Secretariat** - The Global Unions' Committee on Workers' Capital (CWC) is an international labour network of over 600 labour representatives and asset owner board members that advocate for the responsible investment of workers' retirement savings. Founded over 20 years ago, it is a joint initiative of the International Trade Union Confederation, the Global Union Federations and the Trade Union Advisory Committee to the OECD. The Secretariat of the CWC is housed at the Shareholder Association for Research and Education (SHARE) in Canada.

Investor Statement on the Rights to Freedom of Association and Collective Bargaining

The undersigned investors and fiduciaries representing [XX] institutions and [XX] in combined assets under management or advice are writing to express our expectations regarding the rights to freedom of association and collective bargaining.

Labour rights are human rights.¹ The rights to freedom of association and collective bargaining are fundamental pillars of human freedom, established in the International Labour Organization Core Conventions, the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, and the UN Sustainable Development Goals. These rights guarantee that individual workers can join together in protected concerted workplace activity to better their working lives, improve the companies they work for, and contribute to the advancement of society.

Companies that respect labour rights reap many benefits, such as greater productivity, safer workplaces, and improved employee engagement.² Implementing labour rights requires varied approaches across different businesses, regions, and jurisdictions. The undersigned investors agree to three requests to boards and senior management at investee companies:

- Implement a strong governance framework that articulates the board's responsibility for oversight of labour rights based on ILO Core Conventions.
- Take action to respect workers' exercise of their fundamental rights to freedom of association and collective bargaining, for example, but not limited to: adopting labour rights due diligence processes, training management at all levels to meet labour rights standards, and committing to non-interference when workers seek to form or join unions.
- Provide enhanced disclosure of labour rights-related metrics – for example, but not limited to: percentage of workers covered by collective bargaining agreements, pending litigation and regulatory investigations regarding alleged labour rights violations, and any expenditure of company resources on union avoidance activities – which allow investors to assess company labour risk.

We encourage and welcome other investors and their representatives to join us in signing this statement.

¹International Labour Organization (ILO) Core Conventions and the ILO Declaration on Fundamental Principles and Rights at Work: ILO, Freedom of Association and Protection of the Right to Organize Convention, 1948 (No. 87), https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312232; ILO, Right to Organize and Collective Bargaining Convention, 1949 (No. 98), https://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID,P12100_LANG_CODE:312243,en:NO; ILO, ILO Declaration on Fundamental Principles and Rights at Work and its Follow-Up (adopted 1998, amended 2022), https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/normativeinstrument/wcms_716594.pdf; [United Nations Guiding Principles on Business and Human Rights \(UNGPs\)](#); [Organization for Economic Co-operation and Development \(OECD\) Guidelines for Multinational Enterprises \(MNEs\)](#); [United Nations Universal Declaration of Human Rights](#); [UN Sustainable Development Goals, Goal 8](#).

²See text and citations of Global Unions' Committee on Workers' Capital, *Shared Prosperity: The Investor Case for Freedom of Association and Collective Bargaining* (November 2022), <https://www.workerscapital.org/our-resources/shared-prosperity-the-investor-case-for-freedom-of-association-and-collective-bargaining/>.

Update on BAM University:

NON-INVESTMENT MATERIAL -
QUARTERLY PERFORMANCE
REPORTING SECTION (Public Reports):

State Street Quarterly Fund Performance Overview (Public):



New York City
Employees' Retirement System
Performance Overview as of June 30, 2023

Total Fund Overview



New York City Employees' Retirement System

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Through June 30, 2023

**City of New York Employees' Retirement System
Second Quarter 2023 Summary**

General Economic and Market Conditions: We saw a change in tone in economic forecasts coming in over the past six weeks, from one of certain recession in 2023 or at the least 2024, to one of “no recession here.” We see it in the tea leaves of the Fed’s releases after its last couple of meetings and in investment managers’ updates and strategy pieces, and now the professional forecasting community is, well, forecasting no recession this year or next.

What happened? First, the job market remains robust, with unemployment stuck at a generational low. Second, inflation dropped from an alarming 9% rate last June to 3% in just one year. In the broad economy, GDP rebounded from two quarters of decline in 2022 to log four consecutive quarters of solid growth, notching 2.4% in 2Q23. Expectations established just six months ago had a recession hitting in 2Q or 3Q of this year. Now it is rare to find a shorter-term outlook (12-18 months) with a recession as the base case; we’re back to the notion of a soft landing, with GDP gently declining to 1%-1.5% growth in 2024. Did recession risk really disappear?

Interest rates could rise more in the second half of 2023, even though inflation is now down at 3%. The Fed has suggested two more rate hikes are in their cards. The strength remaining in the economy after rates rose 5% in one year gives the Fed headroom to further flex its inflation-fighting chops. The bond market has been expecting a recession since last July, when the yield curve inverted, and there is growing sentiment that perhaps this time, bond investors just might be wrong. The argument is that the bond market got ahead of itself in the spring of 2022, when it immediately and (almost) fully priced in the expected Fed moves by June last year. Then almost as quickly as the market believed the Fed would execute as telegraphed, the market began doubting the resolve of the Fed and the ability of the economy to absorb the historic jump in interest rates, and hence the inversion of the yield curve.

The strength of the job market has been Fed Chair Jerome Powell’s secret weapon, and we have been looking at the details of the job market with great interest. The U.S. economy recouped the nearly 20 million jobs lost in the first months of the pandemic by the middle of 2022, and now supports 4.3 million more non-farm jobs than at the end of 2019. However, some sectors are still woefully short of workers, and many observers believed a recession was necessary to convince people to take the jobs they no longer wanted in hospitality (hotels and restaurants), retail trade, and state and local government. These three sectors make up 34% of the U.S. job market, but all three have yet to surpass their pre-pandemic levels of employment; in fact, they are still 300,000 behind. That means only two-thirds of the job market has accounted for the 4.3 million new jobs. These lagging sectors have large concentrations of lower-paying jobs, so the differential growth in the job market is exacerbating pressure on lower-income workers.



Through June 30, 2023

Three threats that spurred recession fears earlier this year have not yet panned out: crypto, regional banks, and headline layoffs in technology. The collapse of FTX and the troubles across all manner of digital currencies have hurt investors but not taken a meaningful number of jobs, and the failure and takeover of three regional banks has not dented the exuberance of the stock market and the economic forecasters. The job cuts that made headlines at highly visible technology firms were large at the firm level, but small at the industry level, and the job-cutting was contained to technology.

So as recession fears fade, what does it mean for short interest rates, for long rates, and for the stock market? Longer term, the Fed telegraphs 2.5% as the anchor for the Federal Funds rate, but we may see 5%-5.5% for the next 18 months. The broad U.S. stock market (Russell 3000) dropped 24.6% in the first three quarters of 2022, but the index is up 24.5% in the three quarters through June 2023, and the total return since December 2021 is -3%. The backstory is that these gains came from just seven stocks; the rest of the stock market has been flat. Market expectations for stocks exclusive of these hot dots are subdued.

The risk of recession has not gone away, but the onset may have been delayed. One important economic rule of thumb to remember is that it takes about a year for a change in interest rates to work its way through the economy. The Fed started raising rates in March 2022, and has continued into 2023. We may be a year from seeing the full effect of higher rates on the economy.

Please note that all return figures mentioned below are gross of fee.

Total Fund Performance: For the quarter ended June 30, 2023, the Fund returned +2.76%, 53 basis points below the Policy Target return of +3.29%. Over the trailing year, NYCERS has earned a return of +8.71% versus the Policy Target return of +7.44%. Over three years, the total Fund has returned +8.34% annualized. Over the trailing five years, the Fund has gained +7.22% annualized. The trailing ten-year return is +7.95% annualized.

Total Fund Assets: The Fund's assets totaled \$80.5 billion as of the end of the second quarter of 2023.

U.S. Equity: The total domestic equity portion of the NYCERS Fund returned +7.15% for the quarter, below the +8.39% return of the Russell 3000 Index. For the trailing year, NYCERS underperformed the index, returning +18.15% versus +18.95% for the index. The Fund is ahead of the benchmark over the trailing three-year period and below the benchmark over the trailing five- and ten-year periods.



Through June 30, 2023

In Large Cap, the Fund underperformed the Russell 1000 Index, returning +7.14% versus the Russell 1000's return of +8.58% during the second quarter. The Fund's one-year return of +18.01% underperformed the +19.36% return of the Index. The Fund is slightly below the benchmark over the trailing three- and five-year periods.

In Small Cap, the Fund returned +5.56%, above the Russell 2000 return of +5.21% for the quarter. The Fund's one-year return of +17.44% outperformed the +12.31% return of the Index. The Fund is ahead of the benchmark over the trailing three-, five- and ten-year periods.

Developed International: For the quarter, the Fund's Non-U.S. Developed Equity composite returned +3.51% (excluding NYCERS' historical non-U.S. Environmental manager), outperforming the Custom MSCI World ex-US Benchmark by 84 basis points. The Fund returned +21.77% for the trailing one-year period, above the return of the benchmark (+16.35%). The Fund is below the benchmark over the trailing three-year period and above the benchmark over the trailing five- and ten-year periods.

Emerging Markets Equity: The Fund's active emerging markets equity composite returned +3.43% in the quarter, outperforming the +0.90% return of NYCERS custom MSCI benchmark. The active portfolio outperformed the passive one for the quarter. The one-year return for the active emerging markets composite is +9.54%, outperforming the +1.75% return for the benchmark. The active emerging markets equity composite is above the benchmark over the trailing three-, five- and ten-year periods.

Core Fixed Income: The composite of the Fund's core program returned -0.72% during the quarter, outperforming the NYCERS Custom Structured Index return of -0.79%. For the past year, the core composite has returned -0.63%, while the benchmark's return is -0.87%. The Fund is ahead of the benchmark over the trailing three-year period and below the benchmark over the trailing five- and ten-year periods.

TIPS: The Fund's TIPS composite delivered a -1.39% return in the quarter, above the -1.42% return for the Bloomberg US TIPS Index. Over the past year, the Fund's TIPS managers have returned -1.39%, slightly above the benchmark's return of -1.40%. The Fund is slightly below the benchmark over the trailing three- and five-year periods and slightly ahead of the benchmark over the trailing ten-year period.

High Yield: In high yield, the Fund's managers returned +1.62% for the quarter, while NYCERS High Yield Custom Benchmark posted a higher return of +1.75%. The Fund outperformed the custom benchmark over the past year, returning +9.63% as compared to the benchmark's return of +9.07%. The Fund is ahead of the benchmark over the trailing three-, five- and ten-year periods.



Through June 30, 2023

Convertibles: The convertible portfolio returned +2.66% in the quarter, below the +4.98% return of the ICE BofA All US Conv Ex Mandatory Index. Over the past year, the convertibles portfolio has returned +8.47%, underperforming the +11.06% return for the benchmark. The Fund underperformed the benchmark over the trailing three-, five- and ten-year periods.

Opportunistic Fixed Income: The opportunistic fixed income composite returned +1.96% over the second quarter, underperforming the blended benchmark of 50% JP Morgan Global High Yield / 50% Credit Suisse Leveraged Loan Index - Plus 300 bps (+3.22%). The Fund returned +3.98% for the trailing one-year period, below the return of the blended benchmark (+13.02%). The Fund is above the blended benchmark over the trailing three- and five-year periods and below the benchmark over the trailing 10-year period.

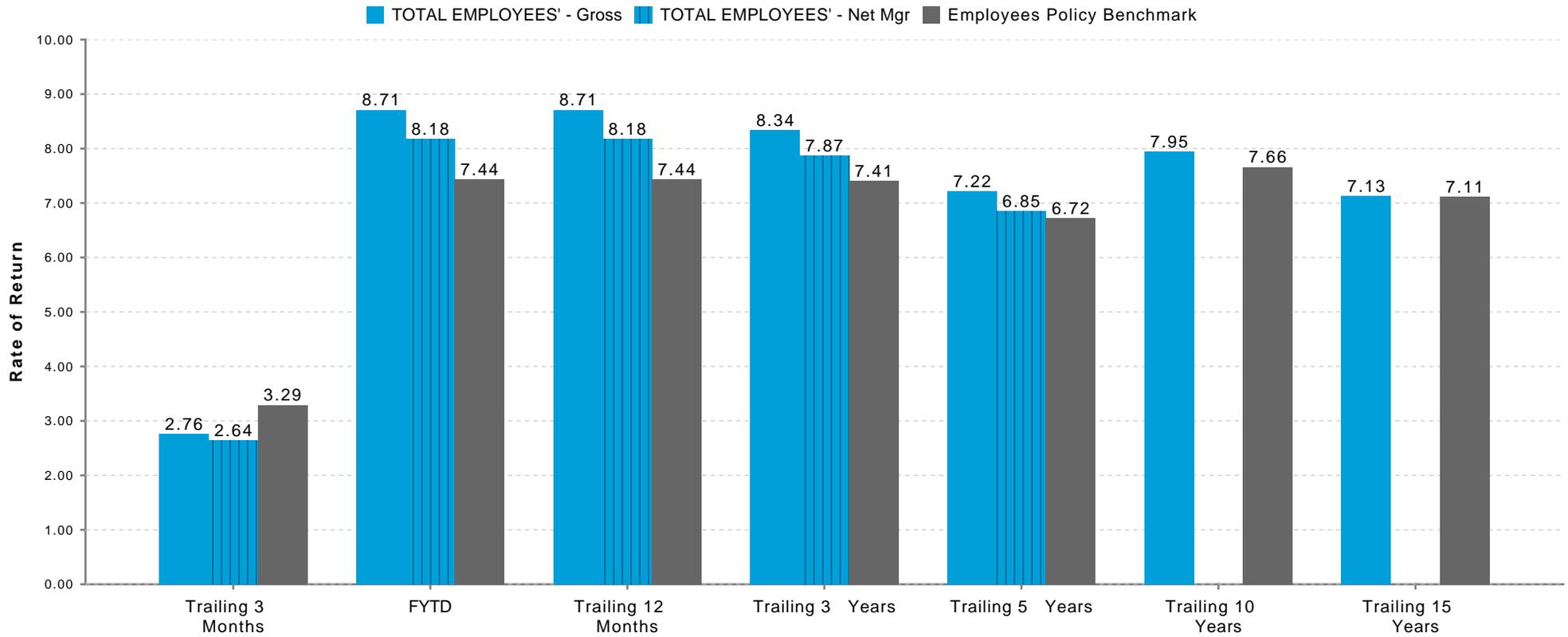
Alternatives: For the quarter, the Private Equity portfolio had approximately \$8.4 billion in invested capital, representing roughly 10.5% of the Total Fund. The Private Real Estate portfolio had approximately \$5.9 billion invested, accounting for roughly 7.3% of the Total Fund. The Infrastructure portfolio had approximately \$2.0 billion invested, or 2.4%. Performance is reported separately by NYCERS' Private Equity and Real Estate consultants.



Market Value (Billions)

TOTAL EMPLOYEES'

\$80.5

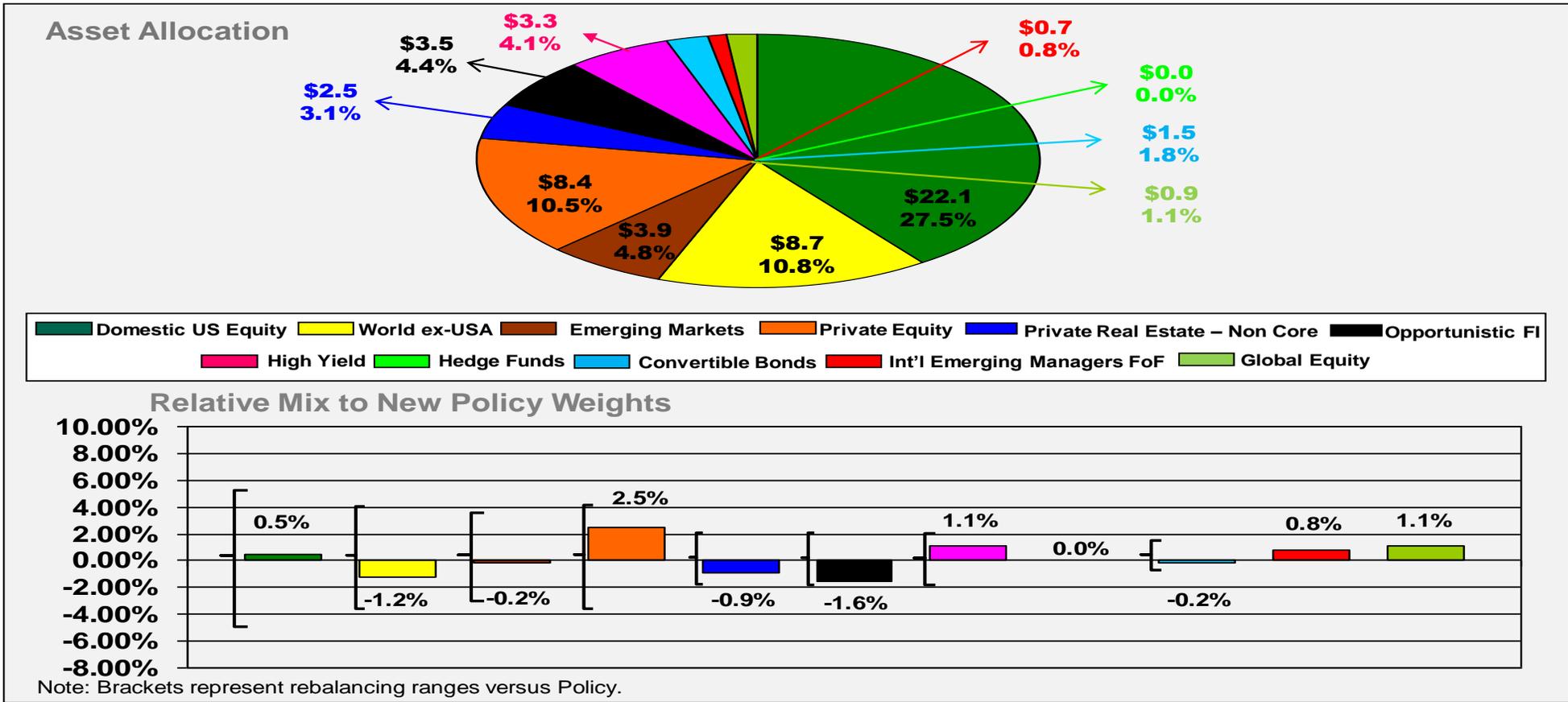


	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 10 Years	Benchmark 10 Years
Standard Deviation						
TOTAL EMPLOYEES'	10.0	10.6	7.2	10.6	8.1	8.4



Portfolio Asset Allocation: June 30, 2023

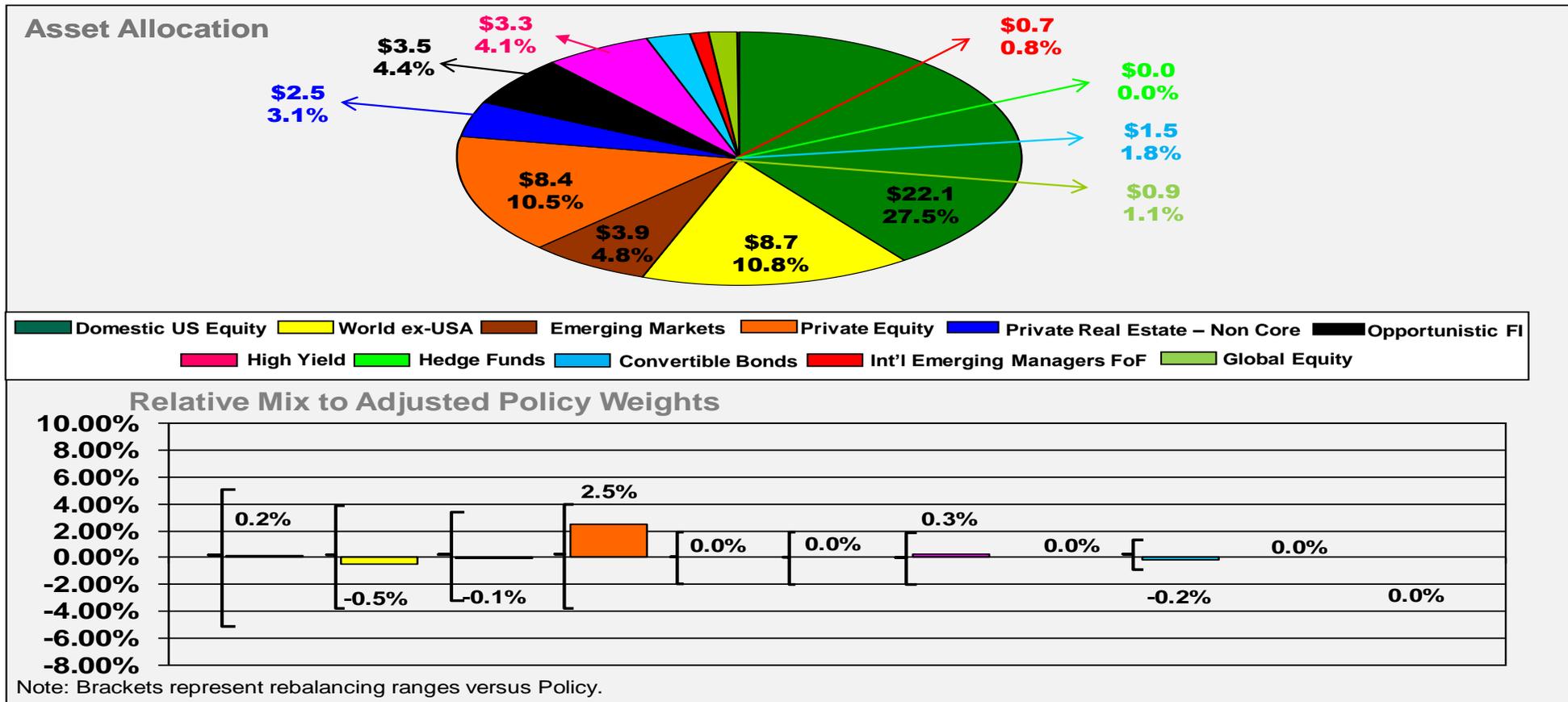
Portfolio Asset Allocation – Growth





Portfolio Asset Allocation: June 30, 2023

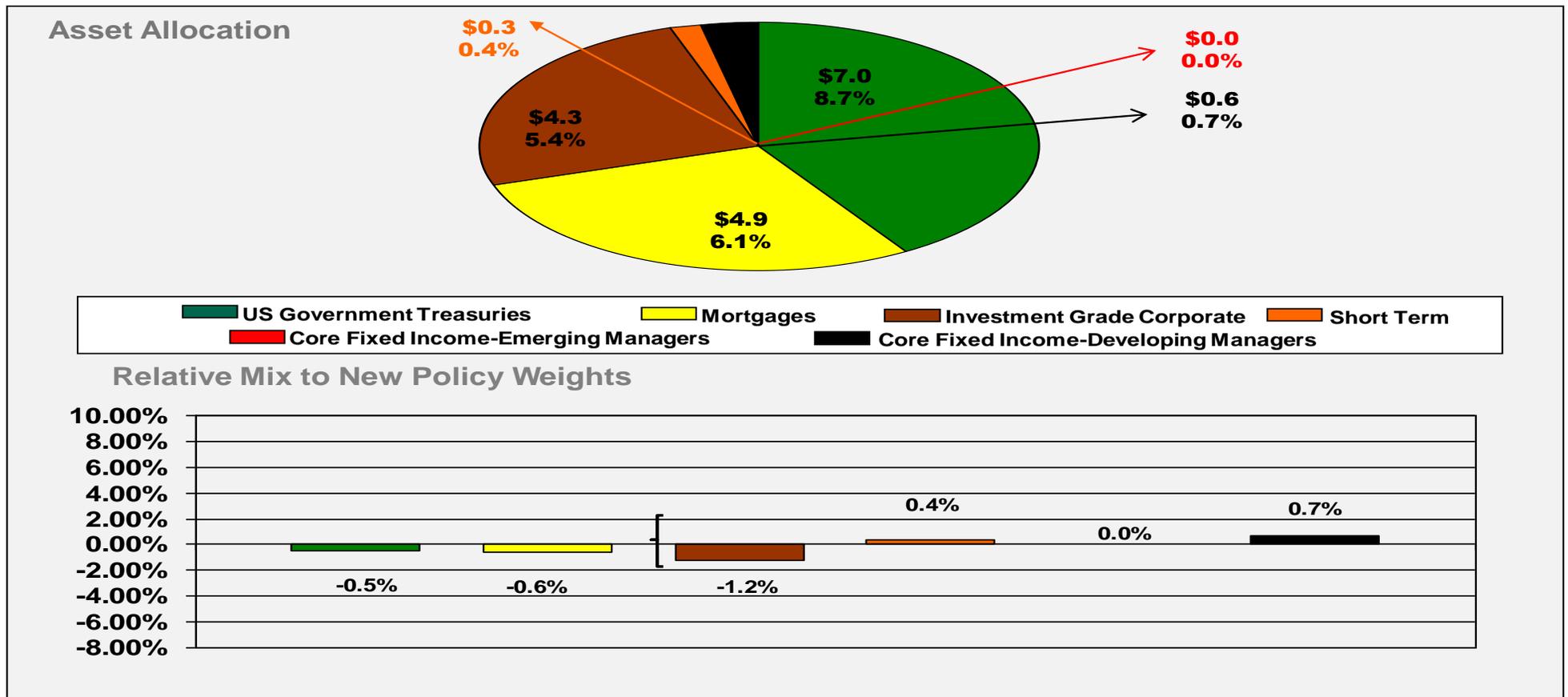
Portfolio Asset Allocation – Growth





Portfolio Asset Allocation: June 30, 2023

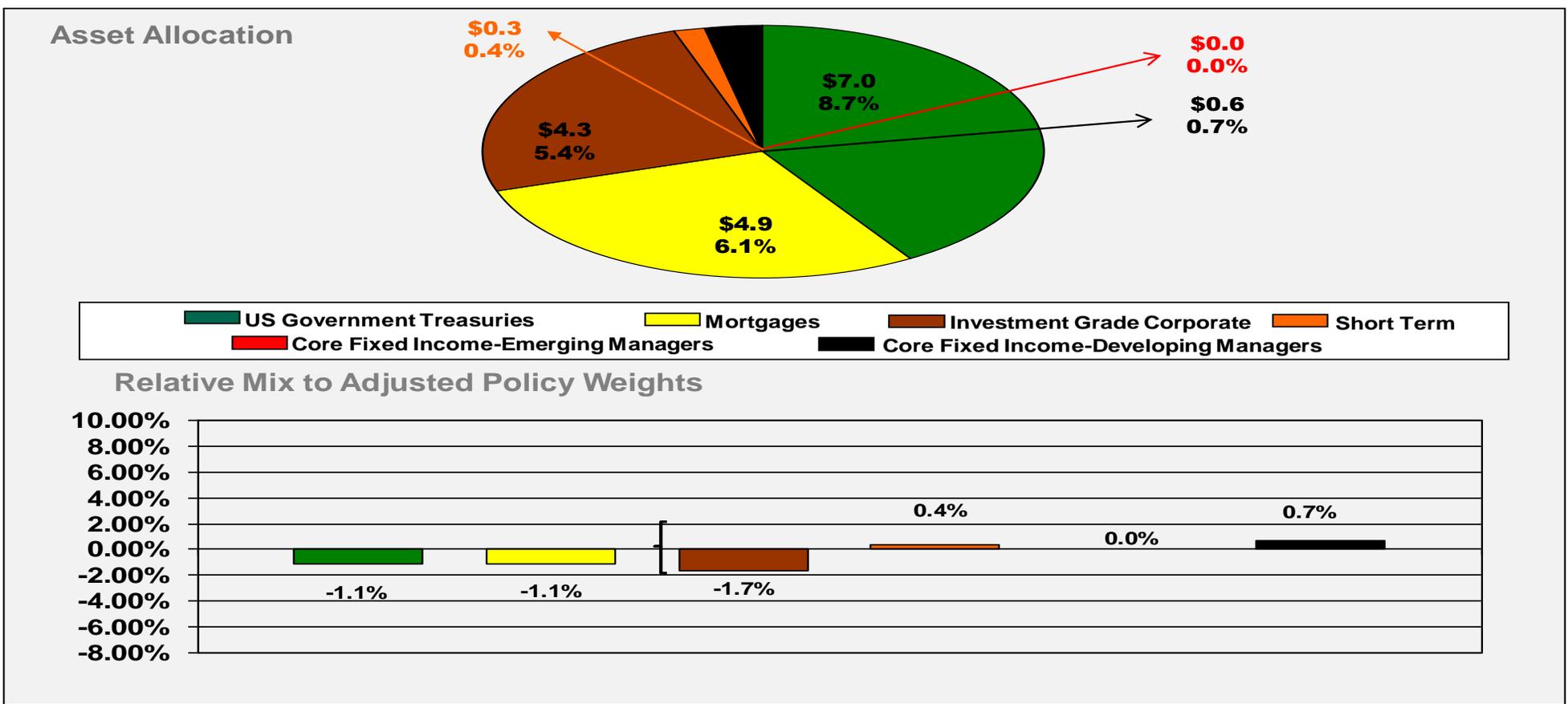
Portfolio Asset Allocation – Deflation Protection





Portfolio Asset Allocation: June 30, 2023

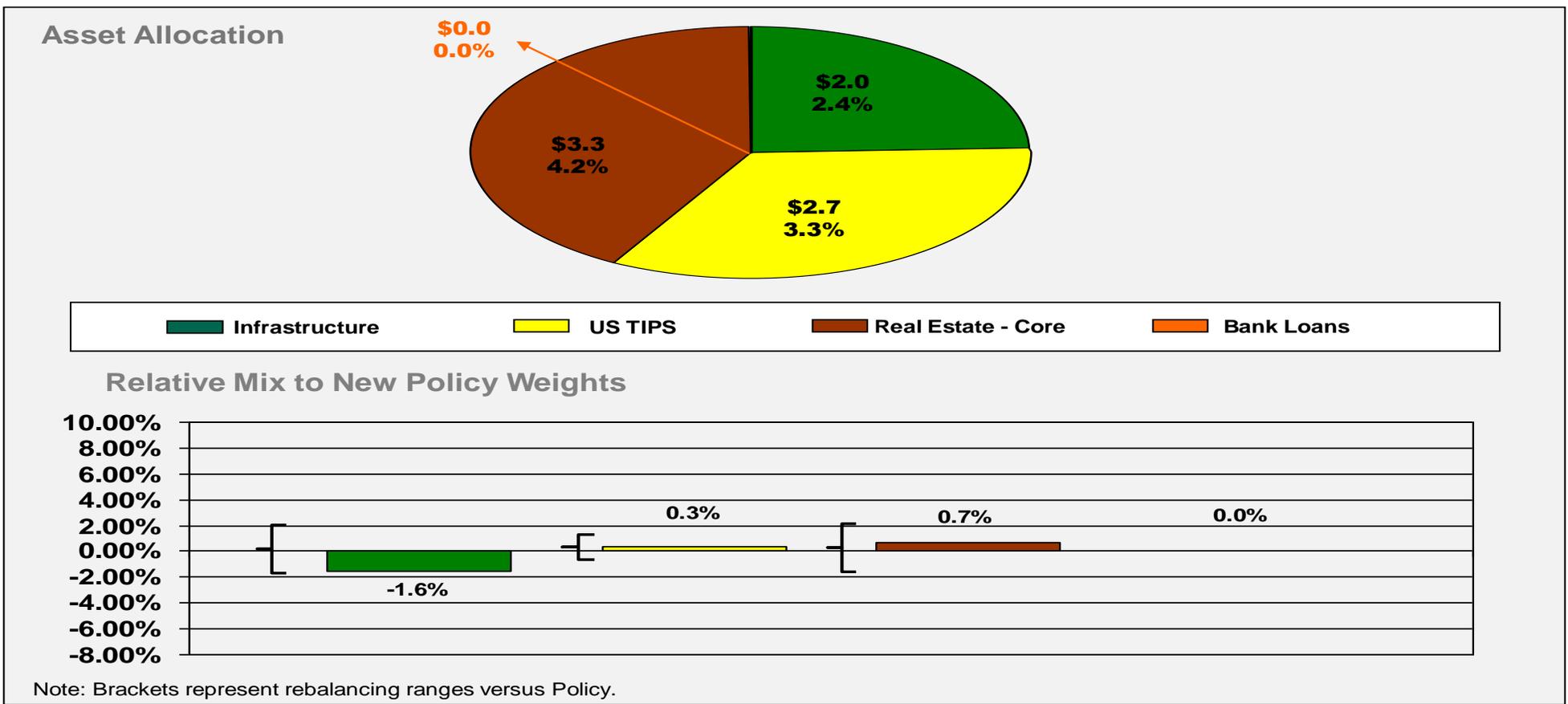
Portfolio Asset Allocation – Deflation Protection





Portfolio Asset Allocation: June 30, 2023

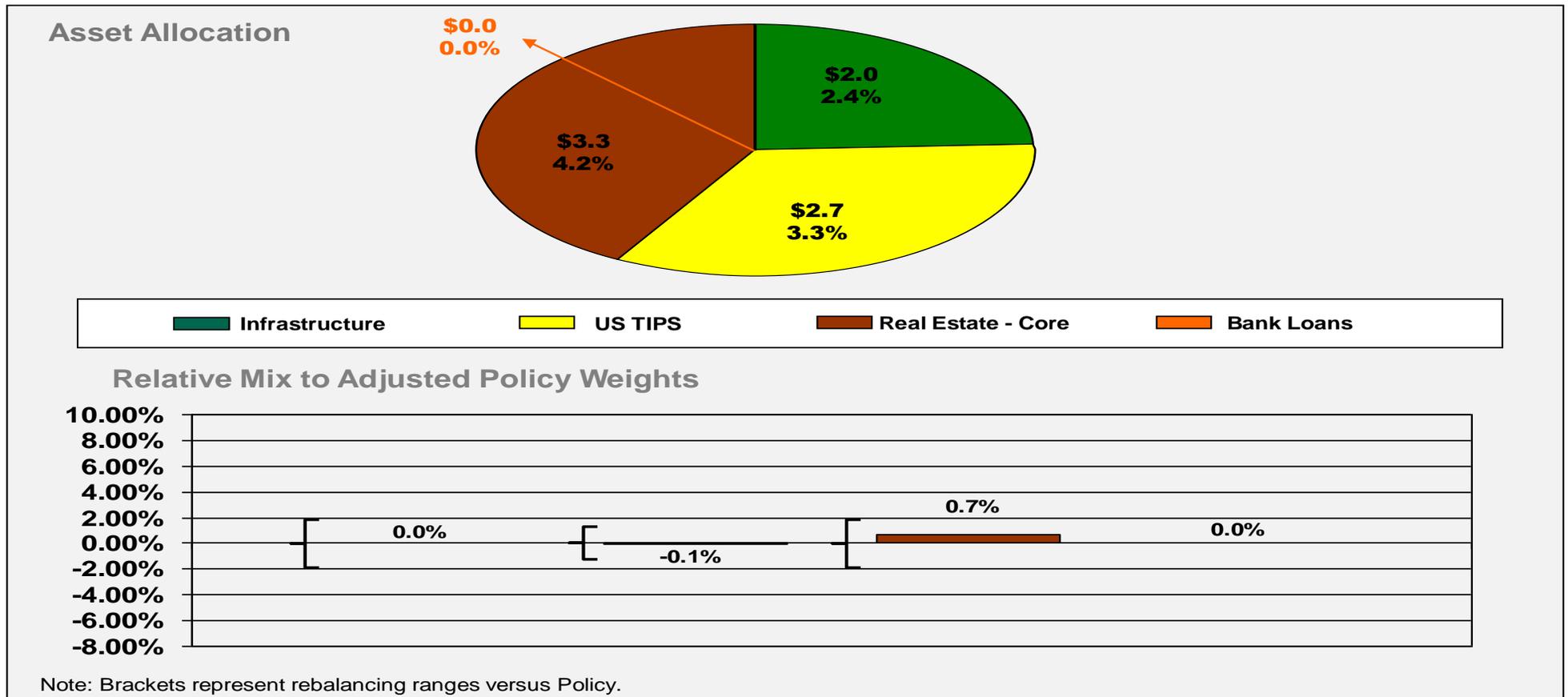
Portfolio Asset Allocation – Inflation Protection

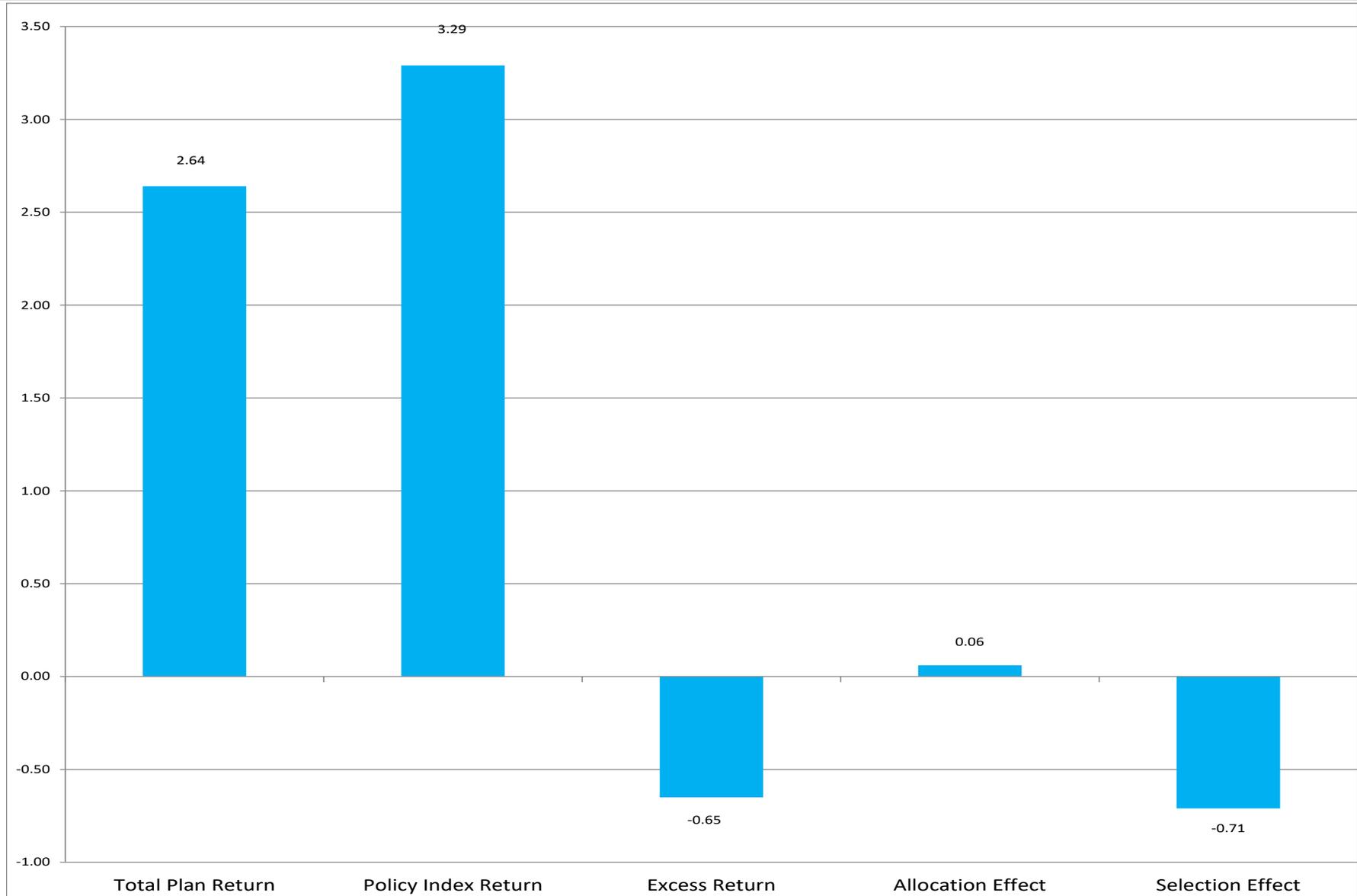


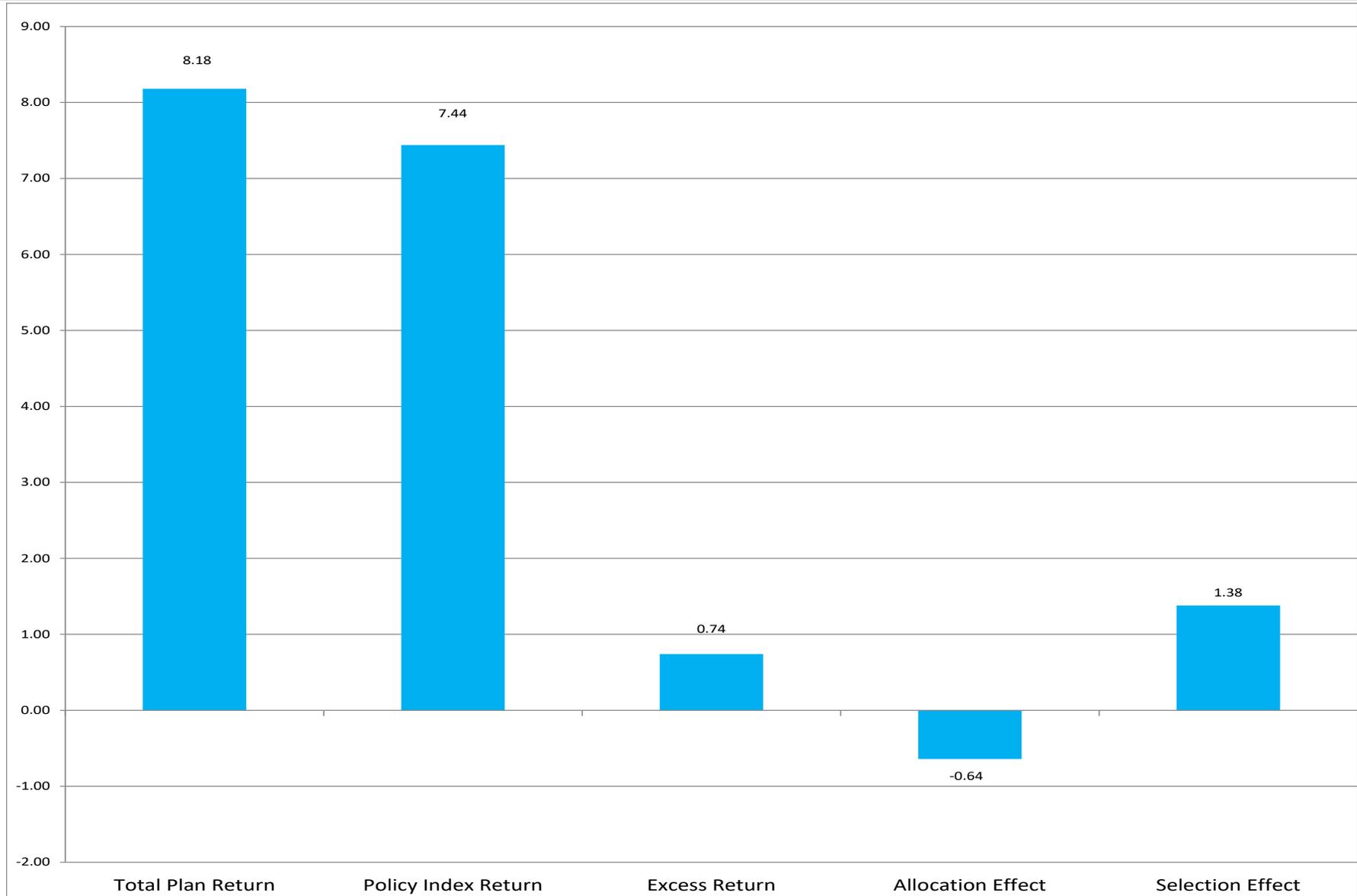


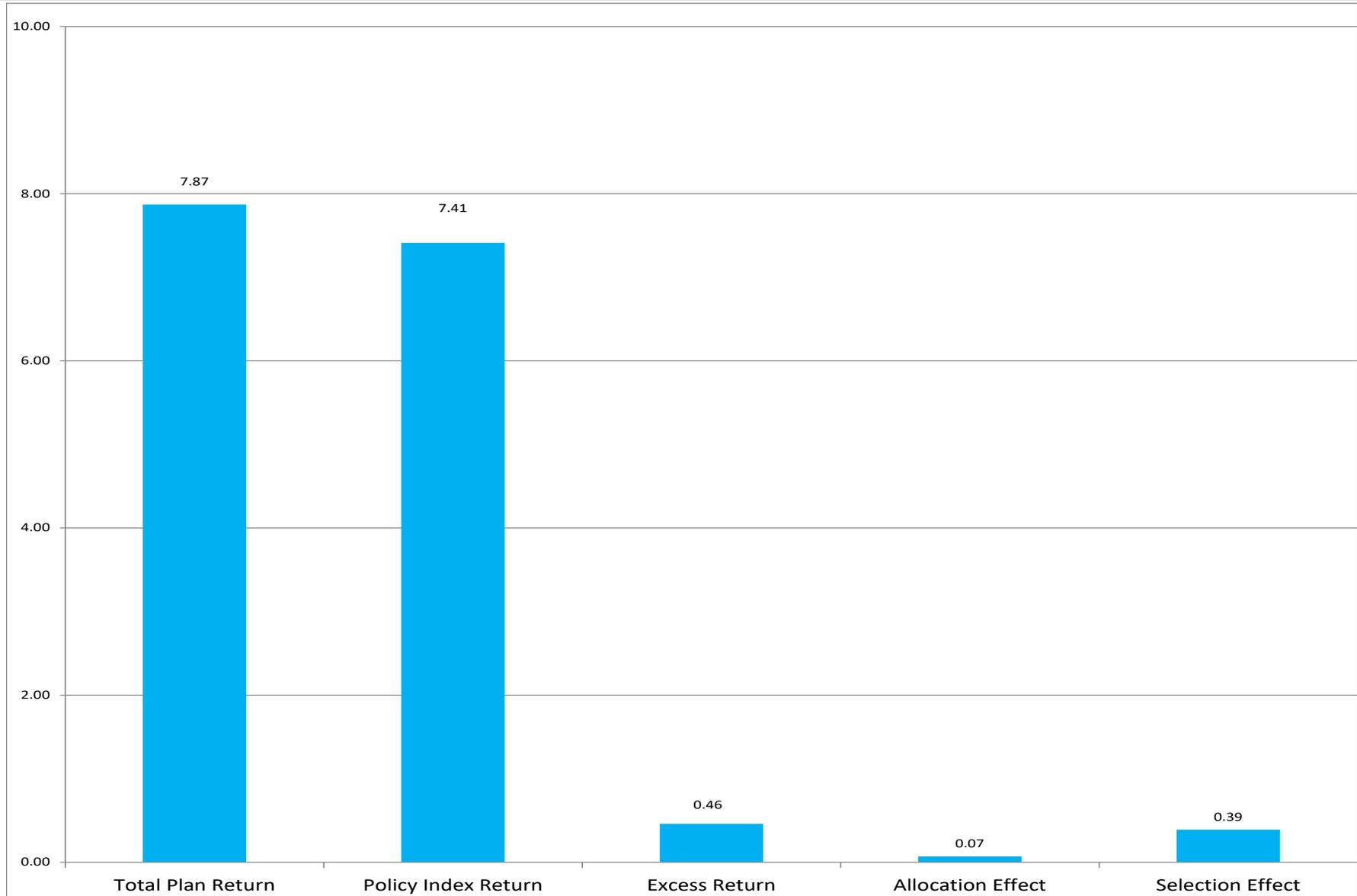
Portfolio Asset Allocation: June 30, 2023

Portfolio Asset Allocation – Inflation Protection











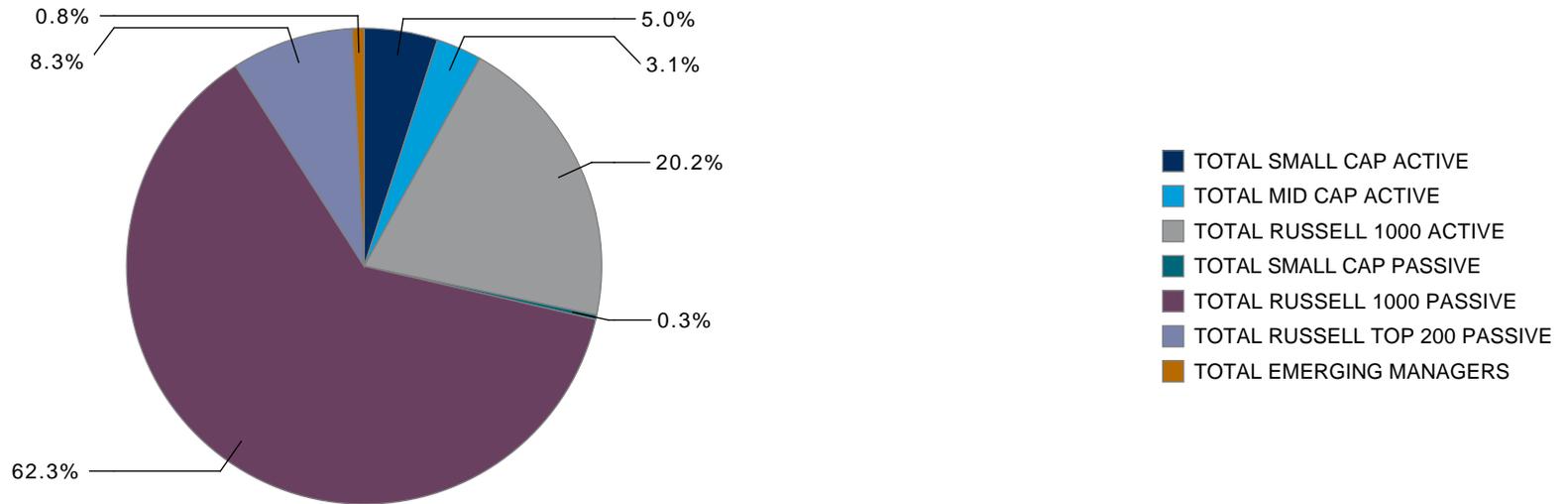
Allocation Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL EMPLOYEES'	0.06	-0.64	0.07	Employees Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.05	-0.17	-0.07	RUSSELL 3000 (DAILY)
TOTAL WORLD ex-USA	-0.01	-0.07	-0.01	NYC Developed Equity Benchmark
TOTAL GLOBAL EQUITY	0.00	-0.01	0.00	MSCI World Index
TOTAL EMERGING MARKETS	0.00	-0.04	-0.03	NYCERS Custom EM Index
TOTAL INTERNATIONAL FOF	0.00	0.00	0.00	NYC Blended Custom Benchmark for FoF (ERS)
TOTAL PRIVATE EQUITY	0.11	-0.28	-0.03	NYC R3000 +3% Lagged
TOTAL PRIVATE REAL ESTATE - CORE	-0.05	-0.20	-0.03	NCREIF ODCE NET
TOTAL PRIVATE REAL ESTATE - NON CORE	0.00	-0.01	0.00	NCREIF ODCE NET +200
TOTAL INFRASTRUCTURE	0.00	0.00	0.00	CPI + 4%
TOTAL HEDGE FUNDS	0.00	0.00	0.00	HFRI Fund of Funds Composite Index + 1%
TOTAL US TREASURY SHORT TERM	0.01	0.01	-0.04	FTSE US Government Bond 1-3 Years Index
TOTAL US TREASURY INTERMEDIATE	0.00	0.01	0.19	USBIG TSY AGN 1-10
TOTAL ACTIVE GOVERNMENT	0.02	0.04	0.02	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.01	0.04	0.05	FTSE US Government Bond 10+ Years Index
TOTAL CORE FI-DEVELOPING MGRS	-0.03	-0.06	-0.09	Bloomberg U.S. Aggregate
TOTAL MORTGAGES	0.04	0.07	0.09	NYC Custom Mortgage Benchmark
TOTAL ETI	0.00	0.00	0.00	Employees Custom Benchmark (No Cash)
TOTAL INVESTMENT GRADE CORPORATE	0.06	0.06	0.11	NYC Custom IGC Benchmark
TOTAL HIGH YIELD	-0.01	-0.01	0.00	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	-0.03	CSFB LEVERAGED LOAN INDEX
TOTAL TIPS MANAGERS	0.00	-0.02	-0.01	Bloomberg Global Infl-Linked: U.S. TIPS
TOTAL CONVERTIBLE BONDS	0.00	-0.01	0.00	ICE BofA All US Conv Ex Mandatory
TOTAL OPPORTUNISTIC FIXED	0.00	0.00	0.00	Opportunistic Fixed Income JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	-0.02	-0.06	-0.09	

Selection Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL EMPLOYEES'	-0.71	1.38	0.39	Employees Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.30	-0.20	0.03	RUSSELL 3000 (DAILY)
TOTAL WORLD ex-USA	0.08	0.50	-0.07	NYC Developed Equity Benchmark
TOTAL GLOBAL EQUITY	-0.01	0.03	-0.01	MSCI World Index
TOTAL EMERGING MARKETS	0.11	0.26	0.06	NYCERS Custom EM Index
TOTAL INTERNATIONAL FOF	0.00	0.01	0.00	NYC Blended Custom Benchmark for FoF (ERS)
TOTAL PRIVATE EQUITY	-0.57	0.47	0.11	NYC R3000 +3% Lagged
TOTAL PRIVATE REAL ESTATE - CORE	-0.03	0.36	0.11	NCREIF ODCE NET
TOTAL PRIVATE REAL ESTATE - NON CORE	0.08	0.29	0.09	NCREIF ODCE NET +200
TOTAL INFRASTRUCTURE	0.02	0.01	0.04	CPI + 4%
TOTAL HEDGE FUNDS	0.00	0.00	0.00	HFRI Fund of Funds Composite Index + 1%
TOTAL US TREASURY SHORT TERM	0.00	0.00	0.00	FTSE US Government Bond 1-3 Years Index
TOTAL US TREASURY INTERMEDIATE	0.00	0.00	0.00	USBIG TSY AGN 1-10
TOTAL ACTIVE GOVERNMENT	0.00	0.01	0.00	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.00	0.01	0.00	FTSE US Government Bond 10+ Years Index
TOTAL CORE FI-DEVELOPING MGRS	0.00	0.01	0.01	Bloomberg U.S. Aggregate
TOTAL MORTGAGES	0.01	0.01	0.01	NYC Custom Mortgage Benchmark
TOTAL ETI	-0.01	0.00	0.01	Employees Custom Benchmark (No Cash)
TOTAL INVESTMENT GRADE CORPORATE	0.01	0.01	0.00	NYC Custom IGC Benchmark
TOTAL HIGH YIELD	-0.01	0.01	0.01	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	-0.01	CSFB LEVERAGED LOAN INDEX
TOTAL TIPS MANAGERS	0.00	0.00	0.00	Bloomberg Global Infl-Linked: U.S. TIPS
TOTAL CONVERTIBLE BONDS	-0.04	-0.05	-0.07	ICE BofA All US Conv Ex Mandatory
TOTAL OPPORTUNISTIC FIXED	-0.05	-0.36	0.08	Opportunistic Fixed Income JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	0.00	0.00	0.00	

Total Domestic Equity Asset Allocations: Quarter Ending June 30, 2023



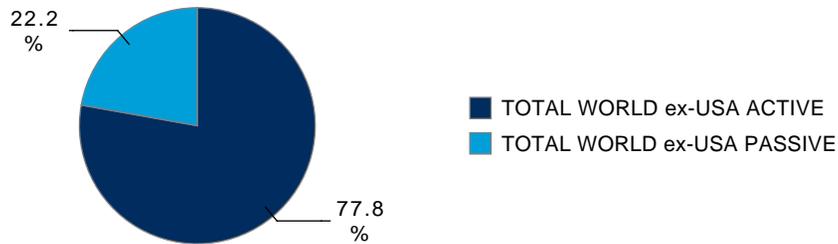
	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL DOMESTIC EQUITY	\$22.1	27.5



	Policy Weight	Actual Weight	Under/Over Weight	Quarterly Returns		
				Fund	Benchmark	Excess
TOTAL SMALL CAP ACTIVE	5.0	5.0	(0.0)	5.6	5.2	0.4
TOTAL MID CAP ACTIVE	3.3	3.1	(0.2)	5.1	4.8	0.4
TOTAL RUSSELL 1000 ACTIVE	17.0	20.2	3.2	2.8	8.6	(5.8)
TOTAL SMALL CAP PASSIVE	0.4	0.3	(0.1)	3.5	5.2	(1.7)
TOTAL RUSSELL 1000 PASSIVE	64.3	62.3	(2.0)	8.6	8.6	0.0
TOTAL RUSSELL TOP 200 PASSIVE	9.5	8.3	(1.2)	9.5	9.9	(0.4)
TOTAL EMERGING MANAGERS	0.5	0.8	0.2	2.9	5.2	(2.3)



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL WORLD ex-USA	\$8.7	10.8

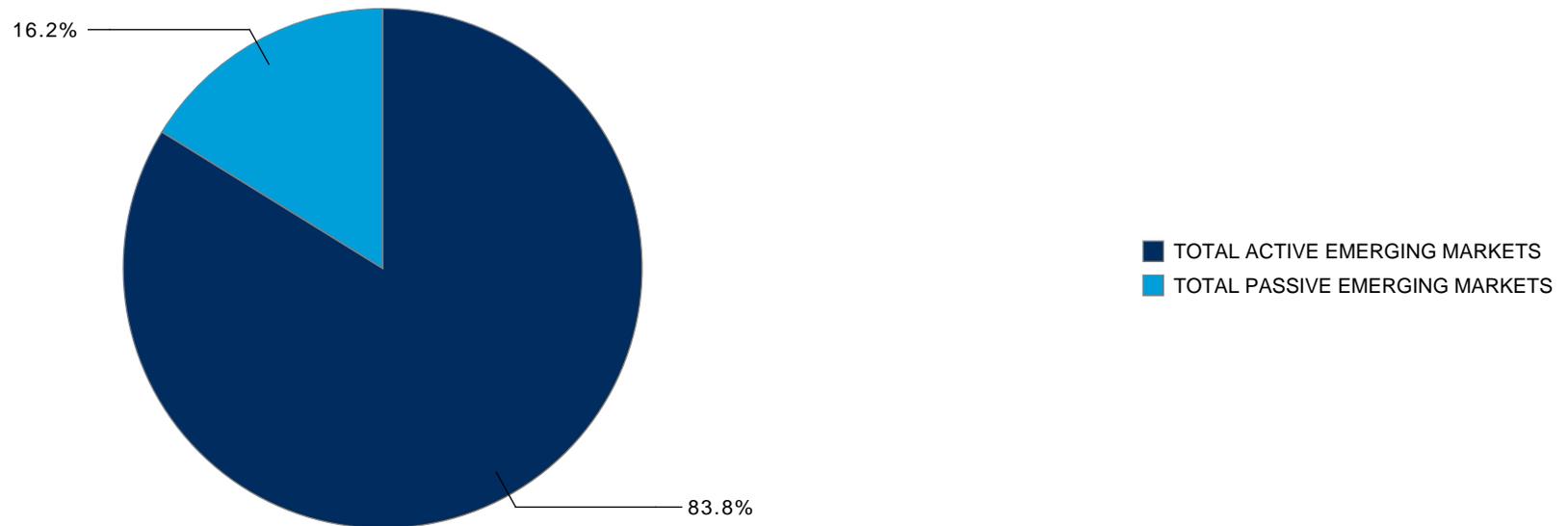


	<u>Asset Class Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL WORLD ex-USA LARGE & MID ACTIVE	69.73	4.11	3.03	1.08
TOTAL WORLD ex-USA SMALL CAP ACTIVE	8.07	0.37	0.17	0.19
TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE	15.48	3.49	3.03	0.46
TOTAL WORLD ex-USA SMALL CAP PASSIVE	6.72	0.62	0.49	0.14
TOTAL WORLD ex-USA	100.00	3.45	2.67	0.77

Emerging Markets Equity Asset Allocation: June 30, 2023



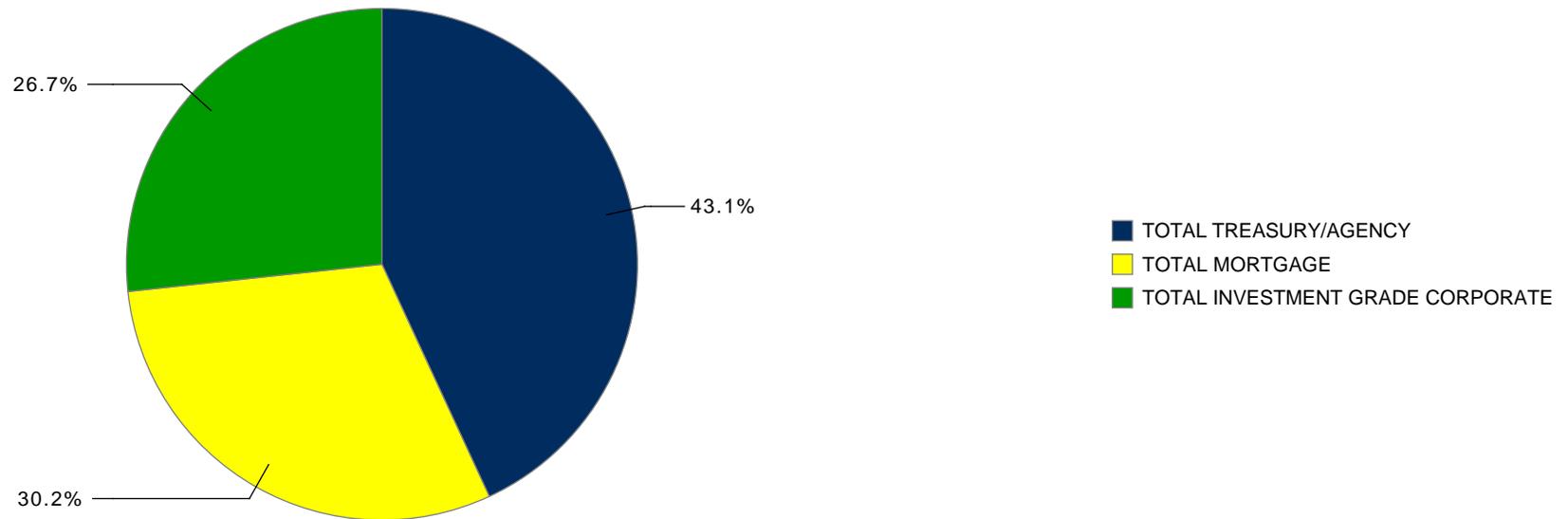
	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL EMERGING MARKETS	\$3.9	4.8



	<u>Asset Class Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL ACTIVE EMERGING MARKETS	83.79	3.78	0.90	2.89
TOTAL PASSIVE EMERGING MARKETS	16.21	1.02	0.90	0.13
TOTAL EMERGING MARKETS	100.00	3.33	0.90	2.43



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL STRUCTURED + ETI	\$16.2	20.2



	<u>Policy Weight</u>	<u>Actual Weight</u>	<u>Under/Over Weight</u>	<u>Quarterly Returns</u>		
				<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL TREASURY/AGENCY	40.08	43.10	3.02	(1.24)	(1.27)	0.03
TOTAL MORTGAGE	29.91	30.19	0.28	(0.68)	(0.64)	(0.03)
TOTAL INVESTMENT GRADE CORPORATE	29.29	26.71	(2.58)	(0.10)	(0.29)	0.19

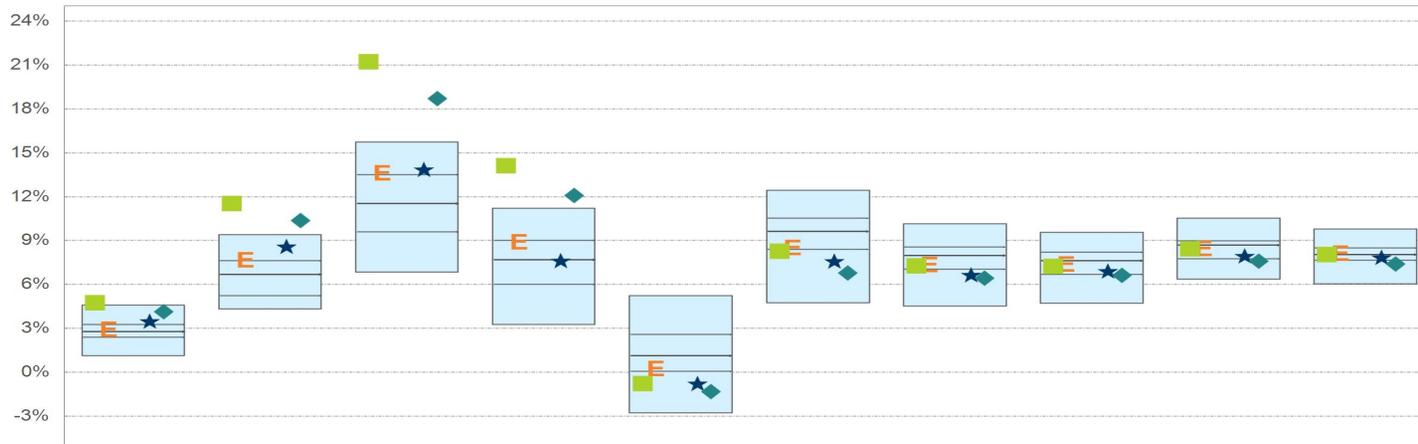


Through June 30, 2023



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
Cumulative Periods Ending : June 30, 2023



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	4.60	9.40	15.74	11.20	5.23	12.45	10.14	9.56	10.53	9.80
25th	3.26	7.63	13.49	9.03	2.60	10.53	8.56	8.20	8.97	8.50
50th	2.77	6.69	11.55	7.69	1.13	9.64	7.97	7.62	8.68	8.06
75th	2.38	5.25	9.59	6.02	0.06	8.40	7.06	6.69	7.77	7.66
95th	1.13	4.32	6.84	3.28	-2.78	4.76	4.53	4.73	6.38	6.04
No. Of Obs	49	48	48	48	47	47	46	45	45	45
E Total System - Employee	2.76 (52)	7.50 (29)	13.44 (27)	8.71 (29)	0.06 (75)	8.34 (77)	7.18 (70)	7.22 (59)	8.28 (63)	7.95 (59)
★ Employees Policy Bench	3.29 (21)	8.40 (11)	13.65 (21)	7.44 (52)	-0.96 (88)	7.41 (88)	6.47 (83)	6.72 (70)	7.75 (75)	7.66 (75)
■ Public Mkt Equiv 25	4.55 (5)	11.33 (1)	21.03 (1)	13.93 (1)	-0.97 (90)	8.08 (79)	7.09 (72)	7.03 (65)	8.25 (63)	7.86 (63)
◆ Public Mkt Equiv 35	3.95 (9)	10.17 (1)	18.52 (1)	11.90 (1)	-1.50 (92)	6.58 (92)	6.23 (92)	6.43 (84)	7.39 (87)	7.21 (84)

Wilshire Trust Universe Comparison Service® (TUCS®)

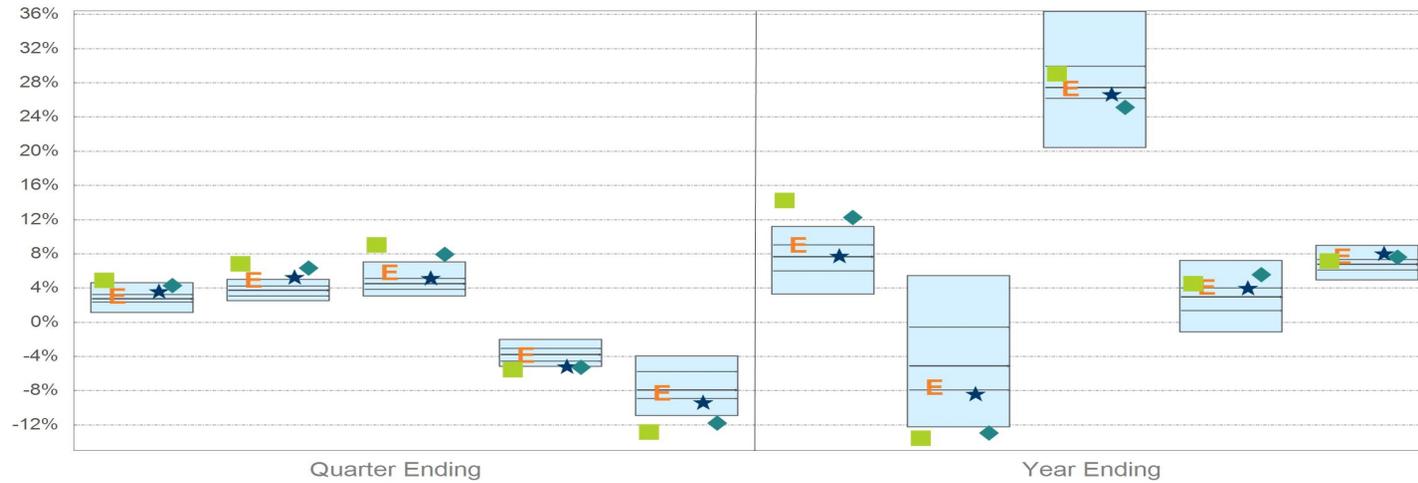


Through June 30, 2023



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
Consecutive Time Periods: June 30, 2023



Percentile Rankings	Jun 23	Mar 23	Dec 22	Sep 22	Jun 22	Jun 23	Jun 22	Jun 21	Jun 20	Jun 19
5th	4.60	5.01	7.07	-1.99	-3.96	11.20	5.46	36.35	7.21	9.00
25th	3.26	4.23	5.12	-3.06	-5.78	9.03	-0.56	29.92	4.01	7.31
50th	2.77	3.74	4.51	-3.76	-7.95	7.69	-5.13	27.44	2.95	6.77
75th	2.38	3.08	3.87	-4.57	-8.90	6.02	-7.91	26.17	1.35	6.14
95th	1.13	2.54	3.10	-5.15	-10.92	3.28	-12.22	20.44	-1.14	4.98
No. Of Obs	49	48	49	49	49	48	48	49	48	47
E Total System - Employee	2.76 (52)	4.61 (13)	5.53 (19)	-4.16 (66)	-8.60 (64)	8.71 (29)	-7.91 (75)	27.01 (58)	3.79 (33)	7.36 (23)
★ Employees Policy Bench	3.29 (21)	4.94 (5)	4.84 (43)	-5.47 (99)	-9.69 (79)	7.44 (52)	-8.70 (79)	26.34 (70)	3.70 (39)	7.73 (15)
■ Public Mkt Equiv 25	4.55 (5)	6.48 (1)	8.71 (1)	-5.87 (100)	-13.15 (99)	13.93 (1)	-13.92 (99)	28.74 (35)	4.17 (23)	6.81 (45)
◆ Public Mkt Equiv 35	3.95 (9)	5.98 (1)	7.58 (1)	-5.59 (99)	-12.10 (99)	11.90 (1)	-13.30 (99)	24.77 (88)	5.21 (11)	7.25 (27)

Wilshire Trust Universe Comparison Service® (TUCS®)



NEW YORK CITY EMPLOYEES RETIREMENT SYSTEM
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2022

INVESTMENT STYLE (EQUITIES)	Avg. Net Asset Value FY 2022 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS
Total US Equities	23,976.93	16,889.23	-	7.04	98.10	0.04	16,981.95	7.08
Small Cap Active:								
Small Cap Growth	1,298.87	10,488.31	-	80.75	22.94	0.18	10,511.25	80.93
Small Cap Value	427.57	4,911.14	-	114.86	-	-	4,911.14	114.86
Small Cap Core	282.38	1,518.10	-	53.76	22.94	0.81	1,541.04	54.57
Small Cap Fundamental Index	588.92	4,059.07	-	68.92	-	-	4,059.07	68.92
Mid Cap Active:								
Mid Cap Growth	178.39	636.73	-	35.69	12.60	0.71	649.33	36.40
Mid Cap Value	94.08	311.12	-	33.07	-	-	311.12	33.07
Mid Cap Core	72.93	313.12	-	42.94	-	-	313.12	42.94
Mid Cap Core	11.38	12.50	-	10.98	12.60	11.07	25.10	22.05
Other Active:								
Russell 1000 Fundamental	4,893.04	5,392.35	-	11.02	62.56	0.13	5,454.91	11.15
Legate (Emerging Manager- Equity)	4,723.12	4,425.32	-	9.37	14.80	0.03	4,440.12	9.40
U.S. Environmental Managers	169.92	967.93	-	56.91	47.76	2.81	1,014.79	59.72
U.S. Environmental Managers	-	-	-	-	-	-	-	-
Total US Active Equities	6,370.30	16,517.39	-	25.93	98.10	0.15	16,615.49	26.08
Small Cap Passive:								
Small Cap Passive	119.94	5.37	-	0.45	-	-	5.37	0.45
Mid Cap Passive:								
Mid Cap Passive	-	-	-	-	-	-	-	-
Russell / S&P Passive:								
Russell 1000 Growth Passive	17,486.68	366.46	-	0.21	-	-	366.46	0.21
Russell 1000 Value Passive	-	-	-	-	-	-	-	-
Russell 1000 Core Passive	-	-	-	-	-	-	-	-
Passive Russell 3000	16,979.20	342.25	-	0.20	-	-	342.25	0.20
Passive S&P 500	-	-	-	-	-	-	-	-
Passive Russell Top 200	507.48	24.21	-	0.48	-	-	24.21	0.48
Total US Passive Equities	17,606.63	371.83	-	0.21	-	-	366.46	0.21
Total International Equities	14,936.52	41,849.03	-	28.02	3,309.75	2.22	45,158.79	30.23
Active Total Global Equities								
Global Equity	552.86	2,963.96	-	53.61	-	-	2,963.96	53.61
Active Total World Ex USA:								
World Ex-USA Large & Mid Developed Growth Active	7,565.03	21,507.40	-	28.43	474.84	0.63	21,982.24	29.06
World Ex-USA Large & Mid Developed Value Active	3,593.94	10,067.62	-	28.07	-	-	10,067.62	28.07
World Ex-USA Large & Mid Developed Value Active	3,216.79	8,945.88	-	27.81	20.67	0.06	8,966.55	27.87
World Ex-USA Developed Small Cap Active	754.24	2,473.70	-	32.80	0.00	0.00	2,473.70	32.80
Total World Ex USA	0.06	-	-	-	454.16	-	454.16	-
NON-U.S. Activist	-	-	-	-	-	-	-	-
NON-U.S. Environmental Managers	-	-	-	-	-	-	-	-
Active Emerging Markets	3,569.78	16,699.76	-	46.78	-	-	16,699.76	46.78
International Fund of Funds	594.22	2,989.75	-	50.31	2,834.92	47.71	5,824.66	98.02
Total Active International Equities	11,729.03	41,196.91	-	35.12	3,309.75	2.82	44,506.67	37.95
Int'l Passive Equities:								
World Ex-USA Small Cap Passive	3,207.49	652.12	-	2.03	-	-	652.12	2.03
World Ex-USA Large & Mid Cap Passive	824.48	250.24	-	3.04	-	-	250.24	3.04
Passive Global	1,667.72	203.04	-	1.22	-	-	203.04	1.22
Passive Emerging Markets	715.29	198.84	-	2.78	-	-	198.84	2.78
Total Int'l Passive Equities	3,207.49	652.12	-	2.03	-	-	652.12	2.03
Real Estate Equity Securities	-	-	-	-	-	-	-	-
Total Public Equities	39,466.30	61,702.22	-	15.63	3,407.85	0.86	65,104.70	16.50

Information Classification: Limited Access



**NEW YORK CITY EMPLOYEES RETIREMENT SYSTEM
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2022**

INVESTMENT STYLE (FIXED INCOME)	Avg. Net Asset Value FY 2022 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS
Total Fixed Income	28,307.77	27,492.75	-	9.71	287.41	0.10	27,780.17	9.81
Structured Program:								
Government Treas/Agency Sector	17,768.96	8,790.94	-	4.95	-	-	8,790.94	4.95
Long Duration Treasury	6,952.75	1,429.59	-	2.06	-	-	1,429.59	2.06
Mortgage Sector	630.08	63.12	-	1.00	-	-	63.12	1.00
Investment Grade Credit Sector	4,601.98	3,055.36	-	6.64	-	-	3,055.36	6.64
	5,584.14	4,242.87	-	7.60	-	-	4,242.87	7.60
Developing Managers	596.04	1,053.52	-	17.68	-	-	1,053.52	17.68
Emerging Managers	0.00	-	-	-	-	-	-	-
TIPS:								
Active TIPS Managers	3,096.32	578.70	-	1.87	-	-	578.70	1.87
Passive TIPS Managers	859.20	466.89	-	5.43	-	-	466.89	5.43
	2,237.13	111.81	-	0.50	-	-	111.81	0.50
High Yield	3,330.73	10,185.10	-	30.58	287.41	0.86	10,472.51	31.44
Bank Loans	5.47	12.53	-	22.92	-	-	12.53	22.92
Convertible Bonds	1,511.45	5,496.46	-	36.37	-	-	5,496.46	36.37
ETI - Access - RBC	166.40	294.96	-	17.73	-	-	294.96	17.73
ETI - AFL-CIO HIT	339.89	1,080.55	-	31.79	-	-	1,080.55	31.79
Other ETI Programs (Internally Managed)	404.90	-	-	-	-	-	-	-
Short Term (Internally Managed and other)	1,087.62	-	-	-	-	-	-	-
Total Public Markets	67,774.07	89,194.97	-	13.16	3,695.27	0.55	92,884.87	13.71
INVESTMENT STYLE (PRIVATE MARKETS)								
Hedge Funds	1.24	-	-	-	-	-	-	-
Private Equity	7,563.29	77,247.09	22,466.88	131.84	115,837.72	153.16	215,551.69	285.00
Private Real Estate	5,110.87	49,687.53	14,602.53	125.79	53,301.61	104.29	117,591.66	230.08
Infrastructure	1,219.88	22,976.67	5,924.40	236.92	(4,536.76)	(37.19)	24,364.31	199.73
Opportunistic Fixed Income	3,112.38	21,804.60	10,156.25	102.69	4,297.13	13.81	36,257.98	116.50
Total Private Markets	17,007.66	171,715.88	53,150.06	132.21	168,899.70	99.31	393,765.64	231.52
Total Overall	84,781.73	260,910.85	53,150.06	37.04	172,594.97	20.36	486,650.51	57.40

The overall carried interest and performance incentive fees paid by NYCERS for the Fiscal Year: 20.36 BPS

General Footnotes:



Through June 30, 2023

NYC EMPLOYEES' RETIREMENT SYSTEM
SECURITIES LENDING INCOME
June 30, 2023

	U. S. FIXED INCOME	U. S. EQUITY	INTERNATIONAL EQUITY	TOTAL
1989	-	-	-	-
1990	256,000	-	-	256,000
1991	754,000	48,000	-	802,000
1992	1,467,000	654,000	367,000	2,488,000
1993	3,445,000	1,308,000	732,000	5,485,000
1994	4,261,000	2,744,000	1,082,000	8,087,000
1995	3,727,000	3,191,000	745,000	7,663,000
1996	3,608,000	3,592,000	1,258,000	8,458,000
1997	3,924,000	5,921,000	1,533,000	11,378,000
1998	6,374,000	7,337,000	1,952,000	15,663,000
1999	6,643,000	6,718,000	2,175,000	15,536,000
2000	6,552,000	7,669,000	3,049,000	17,270,000
2001	10,335,000	10,394,000	4,435,000	25,164,000
2002	5,906,000	7,780,000	3,510,000	17,196,000
2003	2,442,000	4,766,000	3,603,000	10,811,000
2004	3,502,000	5,844,000	3,825,000	13,171,000
2005	5,229,000	8,264,000	4,471,000	17,964,000
2006	4,626,000	10,012,000	4,163,000	18,801,000
2007	9,445,000	15,100,000	4,510,000	29,055,000
2008	25,936,000	26,696,000	6,878,000	59,510,000
2009	8,149,000	16,388,000	4,305,000	28,842,000
2010	3,714,000	10,256,000	3,125,000	17,095,000
2011	4,834,000	12,861,000	5,163,000	22,858,000
2012	6,691,000	16,287,000	4,116,000	27,094,000
2013	5,051,000	17,973,000	3,014,000	26,038,000
2014	5,194,000	14,847,000	5,272,000	25,313,000
2015	5,010,000	16,300,000	6,124,000	27,434,000
2016	6,545,000	19,856,000	5,097,000	31,498,000
2017	9,452,000	16,246,000	4,295,000	29,993,000
2018	14,213,961	13,284,175	6,691,938	34,190,073
2019	9,221,733	12,445,312	4,805,756	26,472,801
2020	9,421,895	6,875,019	3,876,698	20,173,612
2021	13,965,778	7,218,850	3,157,202	24,341,830
2022	17,863,987	6,518,410	2,469,064	26,851,461
2023 (6 Months)	6,199,593	3,167,763	1,158,142	10,525,498
Since Inception	<u>233,958,946</u>	<u>318,561,529</u>	<u>110,957,799</u>	<u>663,478,274</u>



**New York City
Employees' Retirement System**

Appendix A

Consolidated Performance Report

Consolidated Performance Report



Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
SYSTEM RETURN SUMMARY																
5	NYCERS-TOTAL PORTFOLIO - GROSS	80,456	100.00	2.76	8.71	7.50	(7.91)	(11.13)	14.02	13.96	8.71	8.34	7.22	7.95	8.54	07/01/1987
	ESTIMATED INVESTMENT FEES			(0.12)	(0.53)	(0.24)	(0.47)	(0.44)	(0.52)	(0.24)	(0.53)	(0.47)	(0.37)			
	EST MANAGEMENT FEES - PUBLIC MARKET (ACCRUAL)			(0.03)	(0.10)	(0.05)	(0.10)	(0.10)	(0.11)	(0.10)	(0.10)	(0.11)	(0.10)			
	EST MANAGEMENT FEES - ALTERNATIVE MARKETS (CASH)			(0.09)	(0.43)	(0.19)	(0.37)	(0.34)	(0.41)	(0.14)	(0.43)	(0.36)	(0.27)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	NYCERS-TOTAL PORTFOLIO - NET MGR			2.64	8.18	7.25	(8.39)	(11.56)	13.50	13.72	8.18	7.87	6.85			
	NYCERS POLICY BENCHMARK			3.29	7.44	8.40	(8.70)	(13.36)	13.04	13.74	7.44	7.41	6.72	7.66		
	EXCESS RETURN			(0.66)	0.75	(1.14)	0.31	1.80	0.46	(0.01)	0.75	0.45	0.13	0.29		
EQUITY RETURN DETAIL																
18	NYCERS-TOTAL EQUITY (INCLUDING ALTERNATIVES) - GROSS	52,424	65.16	4.31	12.92	9.97	(7.84)	(11.48)	21.48	16.63	12.92	13.76	9.86	10.48	8.46	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.18)	(0.78)	(0.34)	(0.69)	(0.63)	(0.80)	(0.29)	(0.78)	(0.70)	(0.52)			
	EST MANAGEMENT FEES			(0.18)	(0.78)	(0.34)	(0.69)	(0.63)	(0.80)	(0.29)	(0.78)	(0.70)	(0.52)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	NYCERS-TOTAL EQUITY (INCLUDING ALTERNATIVES) - NET MGR			4.13	12.14	9.63	(8.53)	(12.11)	20.69	16.35	12.14	13.06	9.34			
34	NYCERS-TOTAL DOMESTIC EQUITY - GROSS	22,093	27.46	7.15	18.15	14.17	(13.58)	(17.75)	25.88	18.84	18.15	14.03	10.89	11.90	11.30	08/01/1979
	ESTIMATED INVESTMENT FEES			(0.02)	(0.08)	(0.04)	(0.06)	(0.06)	(0.08)	(0.06)	(0.08)	(0.08)	(0.06)			
	NYCERS-TOTAL DOMESTIC EQUITY - NET MGR			7.13	18.07	14.13	(13.64)	(17.81)	25.80	18.78	18.07	13.96	10.83			
	RUSSELL 3000 (DAILY)			8.39	18.95	16.17	(13.87)	(19.21)	25.66	20.89	18.95	13.89	11.39	12.34	11.65	
	EXCESS RETURN			(1.25)	(0.88)	(2.04)	0.22	1.40	0.14	(2.11)	(0.88)	0.07	(0.56)	(0.44)	(0.35)	
44	NYCERS-TOTAL SMALL CAP - GROSS	1,171	1.46	5.56	17.44	10.86	(22.68)	(20.43)	19.93	21.99	17.44	13.66	6.16	9.24	8.39	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.14)	(0.61)	(0.28)	(0.59)	(0.62)	(0.74)	(0.53)	(0.61)	(0.71)	(0.54)			
	NYCERS-TOTAL SMALL CAP - NET MGR			5.43	16.84	10.57	(23.27)	(21.05)	19.19	21.45	16.84	12.95	5.63			
	RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(25.20)	(20.44)	14.82	19.96	12.31	10.82	4.21	8.26	7.66	
	EXCESS RETURN			0.22	4.53	2.49	1.92	(0.61)	4.37	1.49	4.53	2.12	1.42	0.99	0.74	
54	NYCERS-TOTAL MID CAP - GROSS	685	0.85	5.22	16.34	11.05					16.34					02/01/2011
	ESTIMATED INVESTMENT FEES			(0.10)	(0.46)	(0.22)					(0.46)					
	NYCERS-TOTAL MID CAP - NET MGR			5.12	15.88	10.83					15.88					
	S&P 400 MIDCAP INDEX (DAILY)			4.85	17.61	8.84	(14.64)	(13.06)	24.76	13.66	17.61					
	EXCESS RETURN			0.27	(1.73)	1.99					(1.73)					
64	NYCERS-TOTAL RUSSELL 1000 - GROSS	18,238	22.67	7.14	18.01	14.05	(12.83)	(17.37)	26.18	18.55	18.01	13.96	11.25	11.46	11.46	04/01/2018
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)	
	NYCERS-TOTAL RUSSELL 1000 - NET MGR			7.13	17.98	14.04	(12.85)	(17.39)	26.15	18.52	17.98	13.94	11.23	11.44	11.44	
	RUSSELL 1000 (DAILY)			8.58	19.36	16.68	(13.04)	(19.13)	26.45	20.96	19.36	14.09	11.92	12.07	12.07	
	EXCESS RETURN			(1.45)	(1.38)	(2.64)	0.19	1.74	(0.30)	(2.44)	(1.38)	(0.15)	(0.70)	(0.64)	(0.64)	
74	NYCERS-TOTAL RUSSELL TOP 200 PASSIVE - GROSS	1,832	2.28	9.54	21.10	19.58					21.10			1.88	03/01/2022	
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)					(0.01)			(0.01)		
	NYCERS-TOTAL RUSSELL TOP 200 PASSIVE - NET MGR			9.54	21.09	19.57					21.09			1.88		
	RUSSELL TOP 200 INDEX (DAILY)			9.89	20.88	19.42					20.88			3.34		
	EXCESS RETURN			(0.35)	0.22	0.15					0.22			(1.47)		
84	NYCERS-TOTAL FUND OF FUNDS - GROSS	167	0.21	3.07	13.81	8.67	(17.10)	(15.98)	25.50	20.06	13.81	16.51	7.95	9.00	05/01/2017	
	ESTIMATED INVESTMENT FEES			(0.20)	(0.64)	(0.34)	(0.48)	(0.48)	(0.70)	(0.60)	(0.64)	(0.66)	(0.58)	(0.57)		
	NYCERS-TOTAL FUND OF FUNDS - NET MGR			2.87	13.17	8.33	(17.57)	(16.47)	24.80	19.46	13.17	15.85	7.37	8.43		
	RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(25.20)	(20.44)	14.82	19.96	12.31	10.82	4.21	6.38		
	EXCESS RETURN			(2.33)	0.86	0.24	7.62	3.97	9.98	(0.50)	0.86	5.02	3.17	2.05		

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EQUITY RETURN DETAIL																
95	NYCERS-TOTAL WORLD ex-USA - GROSS	8,672	10.78	3.51	21.77	15.31	(25.35)	(20.66)	8.26	19.79	21.77	8.44	5.29	6.97	6.20	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.06)	(0.26)	(0.13)	(0.16)	(0.17)	(0.24)	(0.25)	(0.26)	(0.23)	(0.22)			
	NYCERS-TOTAL WORLD ex-USA - NET MGR			3.45	21.51	15.19	(25.51)	(20.83)	8.02	19.55	21.51	8.21	5.07			
	WORLD EX-USA CUSTOM BM			2.67	16.35	10.46	(17.73)	(15.26)	12.39	8.32	16.35	8.87	4.17	5.63	5.48	
	EXCESS RETURN			0.77	5.17	4.73	(7.78)	(5.57)	(4.37)	11.22	5.17	(0.67)	0.90	1.34	0.71	
105	NYCERS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - GROSS	6,047	7.52	4.18	25.21	18.27	(27.58)	(22.07)	5.91	25.16	25.21	8.49	6.23		5.95	11/01/2013
	ESTIMATED INVESTMENT FEES			(0.07)	(0.35)	(0.17)	(0.20)	(0.22)	(0.29)	(0.35)	(0.35)	(0.30)	(0.30)		(0.30)	
	NYCERS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - NET MGR			4.11	24.86	18.11	(27.78)	(22.28)	5.61	24.81	24.86	8.19	5.93		5.65	
	NYC CUSTOM WORLD EX-USA LG & MID ACT INDEX			3.03	17.41	11.29	(16.76)	(14.29)	12.62	7.59	17.41	9.30	4.58		4.17	
	EXCESS RETURN			1.08	7.44	6.82	(11.02)	(7.99)	(7.01)	17.22	7.44	(1.12)	1.35		1.49	
115	NYCERS-TOTAL WORLD ex-USA SMALL CAP ACTIVE - GROSS	700	0.87	0.45	14.24	7.67	(23.21)	(19.45)	20.17	14.91	14.24	10.39	4.30	8.14	7.44	05/01/2013
	ESTIMATED INVESTMENT FEES			(0.08)	(0.38)	(0.18)	(0.25)	(0.26)	(0.39)	(0.38)	(0.38)	(0.36)	(0.37)			
	NYCERS-TOTAL WORLD ex-USA SMALL CAP ACTIVE - NET MGR			0.37	13.87	7.49	(23.46)	(19.71)	19.78	14.53	13.87	10.03	3.94			
	S&P EPAC SMALL CAP USD NET			0.17	10.76	6.71	(26.27)	(22.69)	8.06	13.78	10.76	5.12	0.86	5.83	5.14	
	EXCESS RETURN			0.19	3.11	0.78	2.81	2.98	11.72	0.75	3.11	4.91	3.07	2.30	2.30	
125	NYCERS-TOTAL WORLD ex-USA LARGE CAP PASSIVE - GROSS	1,343	1.67	3.49	17.56	12.16	(17.72)	(15.48)	12.34	8.09	17.56	8.99	4.54	5.55	4.92	02/01/2011
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)			
	NYCERS-TOTAL WORLD ex-USA LARGE CAP PASSIVE - NET MGR			3.49	17.54	12.15	(17.73)	(15.49)	12.33	8.08	17.54	8.98	4.53			
	NYC CUSTOM WORLD EX US INDEX			3.03	17.41	11.29	(16.76)	(14.29)	12.62	7.59	17.41	9.30	4.58	5.43	4.75	
	EXCESS RETURN			0.46	0.13	0.86	(0.97)	(1.20)	(0.30)	0.49	0.13	(0.32)	(0.05)	0.12	0.17	
135	NYCERS-TOTAL WORLD ex-USA SMALL CAP PASSIVE - GROSS	583	0.72	0.62	10.36	5.77	(23.42)	(20.83)	11.05	13.30	10.36	6.39	1.96		5.09	02/01/2014
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)		(0.03)	
	NYCERS-TOTAL WORLD ex-USA SMALL CAP PASSIVE - NET MGR			0.62	10.33	5.77	(23.44)	(20.85)	11.02	13.26	10.33	6.36	1.93		5.05	
	WORLD EX USA SC PASSIVE CUSTOM BM			0.49	10.05	5.50	(23.02)	(20.58)	11.14	12.78	10.05	6.42	1.83		4.80	
	EXCESS RETURN			0.14	0.29	0.27	(0.42)	(0.27)	(0.12)	0.48	0.29	(0.06)	0.10		0.25	

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
EQUITY RETURN DETAIL																
147	NYCERS-TOTAL EMERGING MARKETS - GROSS	3,851	4.79	3.43	8.29	9.50	(27.11)	(20.59)	(0.03)	16.31	8.29	6.20	2.08	2.92	5.80	09/01/2005
	ESTIMATED INVESTMENT FEES			(0.10)	(0.46)	(0.21)	(0.28)	(0.34)	(0.37)	(0.33)	(0.46)	(0.40)	(0.34)			
	NYCERS-TOTAL EMERGING MARKETS - NET MGR			3.33	7.82	9.28	(27.39)	(20.93)	(0.40)	15.98	7.82	5.80	1.74			
	NYCERS CUSTOM EM INDEX			0.90	1.75	4.89	(25.28)	(20.09)	(1.45)	14.99	1.75	4.35	0.96	2.39	5.37	
	EXCESS RETURN			2.43	6.08	4.39	(2.10)	(0.84)	1.05	1.00	6.08	1.45	0.78	0.53	0.43	
157	NYCERS-TOTAL ACTIVE EMERGING MARKETS - GROSS	3,226	4.01	3.90	9.54	10.31	(27.43)	(20.72)	1.03	17.93	9.54	7.02	2.61	3.41	6.22	11/01/2005
	ESTIMATED INVESTMENT FEES			(0.12)	(0.56)	(0.25)	(0.33)	(0.40)	(0.46)	(0.52)	(0.56)	(0.51)	(0.46)			
	NYCERS-TOTAL ACTIVE EMERGING MARKETS - NET MGR			3.78	8.98	10.06	(27.76)	(21.12)	0.56	17.41	8.98	6.51	2.15			
	NYCERS CUSTOM EM INDEX			0.90	1.75	4.89	(25.28)	(20.09)	(1.45)	14.99	1.75	4.35	0.96	2.39	5.27	
	EXCESS RETURN			2.89	7.23	5.17	(2.48)	(1.03)	2.01	2.43	7.23	2.16	1.19	1.01	0.96	
167	NYCERS-TOTAL PASSIVE EMERGING MARKETS - GROSS	624	0.78	1.03	2.25	5.45	(25.48)	(19.93)	(2.99)	14.82	2.25	3.91	0.74	1.86	0.24	04/01/2011
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)			
	NYCERS-TOTAL PASSIVE EMERGING MARKETS - NET MGR			1.02	2.23	5.43	(25.50)	(19.95)	(3.01)	14.79	2.23	3.88	0.72			
	NYCERS CUSTOM PASSIVE EM INDEX			0.90	1.75	4.89	(25.28)	(20.09)	(1.45)	14.99	1.75	4.35	0.96			
	EXCESS RETURN			0.13	0.48	0.54	(0.22)	0.14	(1.57)	(0.20)	0.48	(0.46)	(0.24)			
177	NYCERS-TOTAL INTERNATIONAL FUND OF FUNDS - GROSS	653	0.81	2.58	14.68	11.17	(22.93)	(20.33)	10.37	14.52	14.68	7.33	3.91	5.09	05/01/2017	
	ESTIMATED INVESTMENT FEES			(0.23)	(0.69)	(0.39)	(0.38)	(0.40)	(0.62)	(0.62)	(0.69)	(0.60)	(0.57)	(0.57)		
	NYCERS-TOTAL INTERNATIONAL FUND OF FUNDS - NET MGR			2.35	13.99	10.78	(23.31)	(20.73)	9.75	13.90	13.99	6.73	3.35	4.53		
	NYC BLENDED CUSTOM BENCHMARK FOR FOF (ERS)			2.38	12.47	9.10	(19.86)	(16.58)	8.95	9.45	12.47	7.38	3.24	4.32		
	EXCESS RETURN			(0.03)	1.52	1.68	(3.45)	(4.15)	0.80	4.45	1.52	(0.65)	0.10	0.21		
187	NYCERS-TOTAL GLOBAL EQUITY - GROSS	886	1.10	5.79	23.13	16.48	(21.98)	(24.05)	23.30	21.23	23.13	11.07		10.72	08/01/2018	
	ESTIMATED INVESTMENT FEES			(0.14)	(0.64)	(0.30)	(0.43)	(0.40)	(0.70)	(0.70)	(0.64)	(0.61)	(0.62)	(0.62)		
	NYCERS-TOTAL GLOBAL EQUITY - NET MGR			5.66	22.50	16.19	(22.40)	(24.45)	22.60	20.53	22.50	10.47		10.10		
	MSCI WORLD INDEX			6.83	18.51	15.09	(14.34)	(18.14)	21.82	15.90	18.51	12.18		8.55		
	EXCESS RETURN			(1.17)	3.99	1.10	(8.06)	(6.30)	0.79	4.63	3.99	(1.71)		1.55		

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
ALTERNATIVE EQUITY RETURN DETAIL																
205	NYCERS-TOTAL HEDGE FUND* - NET MGR	1	0.00	(17.85)	(27.97)	(18.46)	2.29	(12.57)	25.10	(20.42)	(27.97)	(4.54)	(5.64)	(1.16)	(0.47)	07/01/2011
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			1.78	4.72	2.80	(4.55)	(4.36)	7.23	11.98	4.72	6.09	4.35	4.43	4.05	
	EXCESS RETURN			(19.63)	(32.69)	(21.25)	6.85	(8.22)	17.87	(32.40)	(32.69)	(10.63)	(9.99)	(5.58)	(4.53)	
215	NYCERS-TOTAL DIRECT HEDGE FUNDS* - NET MGR	1	0.00	(17.85)	(27.97)	(18.46)	2.29	(12.57)	25.10	(20.42)	(27.97)	(4.54)	(5.64)	(1.00)	(0.01)	01/01/2012
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			1.78	4.72	2.80	(4.55)	(4.36)	7.23	11.98	4.72	6.09	4.35	4.43	4.70	
	EXCESS RETURN			(19.63)	(32.69)	(21.25)	6.85	(8.22)	17.87	(32.40)	(32.69)	(10.63)	(9.99)	(5.43)	(4.71)	

* INFORMATION PROVIDED BY ALPHA FRONTIER

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
ALTERNATIVE EQUITY RETURN DETAIL																
224	NYCERS-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - GROSS	8,433	10.48	2.83	2.64	4.41	28.86	5.14	47.80	18.64	2.64	26.24	18.84	16.16	14.02	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.52)	(2.14)	(1.04)	(3.67)	(2.11)	(4.38)	(1.14)	(2.14)	(2.76)	(2.02)			
	NYCERS-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - NET MGR			2.30	0.50	3.37	25.20	3.03	43.41	17.50	0.50	23.47	16.83			
	NYC R3000 +3% LAGGED			7.96	(5.81)	16.55	15.25	(15.11)	35.74	18.42	(5.81)	21.99	13.74	14.97	13.27	
	EXCESS RETURN			(5.65)	6.31	(13.18)	9.94	18.14	7.67	(0.92)	6.31	1.49	3.09	1.19	0.76	
234	NYCERS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - GROSS	5,870	7.30	(1.72)	(0.77)	(3.85)	31.93	18.96	22.39	0.82	(0.77)	12.48	9.62	11.25	9.53	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.22)	(1.08)	(0.43)	(2.37)	(1.90)	(1.65)	(0.69)	(1.08)	(1.42)	(1.11)			
	NYCERS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - NET MGR			(1.95)	(1.85)	(4.28)	29.56	17.05	20.74	0.12	(1.85)	11.07	8.52			
	NCREIF NFI-ODCE NET + 100 BP			(2.64)	(9.83)	(5.69)	29.57	7.61	22.21	1.35	(9.83)	8.11	6.61	8.84		
	EXCESS RETURN			0.69	7.98	1.41	(0.01)	9.44	(1.46)	(1.23)	7.98	2.96	1.90	2.41		
244	NYCERS-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - GROSS	1,965	2.44	3.34	11.11	7.34	18.25	13.68	18.05	10.04	11.11	16.54	14.07	14.86	12/01/2013	
	ESTIMATED INVESTMENT FEES			(0.92)	(3.54)	(1.24)	(3.18)	(3.70)	(2.99)	(1.41)	(3.54)	(2.91)	(2.34)	(2.88)		
	NYCERS-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - NET MGR			2.42	7.57	6.11	15.07	9.98	15.06	8.63	7.57	13.62	11.73	11.98		
	CPI + 4%			1.67	7.22	3.63	13.29	10.70	11.48	5.37	7.22	9.97	8.05	6.87		
	EXCESS RETURN			0.76	0.35	2.47	1.78	(0.72)	3.58	3.25	0.35	3.65	3.68	5.11		

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
FIXED INCOME RETURN DETAIL																
256	NYCERS-TOTAL FIXED INCOME - GROSS	28,031	34.84	(0.00)	1.42	3.13	(8.15)	(10.76)	2.02	9.58	1.42	(0.61)	2.57	3.11	7.53	02/01/1980
	ESTIMATED INVESTMENT FEES			(0.03)	(0.14)	(0.08)	(0.10)	(0.10)	(0.12)	(0.13)	(0.14)	(0.12)	(0.12)			
	EST MANAGEMENT FEES			(0.03)	(0.14)	(0.08)	(0.10)	(0.10)	(0.12)	(0.13)	(0.14)	(0.12)	(0.12)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	NYCERS-TOTAL FIXED INCOME - NET MGR			(0.03)	1.28	3.05	(8.25)	(10.86)	1.90	9.46	1.28	(0.73)	2.45			
264	NYCERS-TOTAL FIXED INCOME (ex OFI & CASH) - GROSS	24,193		(0.31)	1.09	2.96	(10.22)	(12.46)	0.59	10.50	1.09	(1.87)	2.09	2.61	11/01/2013	
	ESTIMATED INVESTMENT FEES			(0.03)	(0.11)	(0.05)	(0.09)	(0.09)	(0.11)	(0.13)	(0.11)	(0.11)	(0.11)	(0.13)	(0.13)	
	EST MANAGEMENT FEES			(0.03)	(0.11)	(0.05)	(0.09)	(0.09)	(0.11)	(0.13)	(0.11)	(0.11)	(0.11)	(0.13)	(0.13)	
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	NYCERS-TOTAL FIXED INCOME (ex OFI & CASH) - NET MGR			(0.34)	0.98	2.90	(10.31)	(12.55)	0.48	10.37	0.98	(1.97)	1.98	2.48		
272	NYCERS-TOTAL STRUCTURED FIXED INCOME - GROSS	15,408	19.15	(0.72)	(0.63)	2.45	(10.52)	(13.27)	(1.53)	11.47	(0.63)	(3.85)	1.62	2.32	6.80	01/01/1985
	ESTIMATED INVESTMENT FEES			(0.01)	(0.05)	(0.03)	(0.04)	(0.04)	(0.05)	(0.06)	(0.05)	(0.05)	(0.05)			
	NYCERS-TOTAL STRUCTURED FIXED INCOME - NET MGR			(0.73)	(0.68)	2.42	(10.56)	(13.31)	(1.58)	11.41	(0.68)	(3.90)	1.57			
	NYC CUSTOM STRUCTURED INDEX-ERS			(0.79)	(0.87)	2.29	(10.28)	(13.16)	(1.43)	12.44	(0.87)	(3.96)	2.03	2.40		
	EXCESS RETURN			0.06	0.19	0.13	(0.28)	(0.15)	(0.15)	(1.04)	0.19	0.05	(0.46)	(0.08)		
282	NYCERS-TOTAL GOVERNMENT - GROSS	6,997		(1.24)	(1.87)	1.89	(8.24)	(11.89)	(2.37)	11.17	(1.87)	(4.49)	1.46	1.98	6.28	01/01/1987
	ESTIMATED INVESTMENT FEES			(0.00)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.03)			
	NYCERS-TOTAL GOVERNMENT - NET MGR			(1.24)	(1.89)	1.88	(8.26)	(11.90)	(2.39)	11.14	(1.89)	(4.51)	1.43			
	CUSTOM GOVERNMENT BENCHMARK - ERS			(1.27)	(2.15)	1.94	(8.34)	(12.32)	(2.10)	13.85	(2.15)	(4.53)	2.35	2.54		
	EXCESS RETURN			0.03	0.26	(0.06)	0.09	0.41	(0.29)	(2.72)	0.26	0.02	(0.92)	(0.55)		
292	NYCERS-TOTAL MORTGAGE - GROSS	4,074		(0.50)	(1.32)	2.13	(9.19)	(11.96)	(1.01)	4.73	(1.32)	(3.52)	0.30	1.36	5.59	03/01/1987
	ESTIMATED INVESTMENT FEES			(0.02)	(0.07)	(0.04)	(0.06)	(0.05)	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)			
	NYCERS-TOTAL MORTGAGE - NET MGR			(0.52)	(1.38)	2.09	(9.25)	(12.02)	(1.07)	4.67	(1.38)	(3.58)	0.25			
	NYC CUSTOM MORTGAGE BENCHMARK			(0.64)	(1.52)	1.87	(9.03)	(11.81)	(1.04)	3.91	(1.52)	(3.75)	0.10	1.16	5.26	
	EXCESS RETURN			0.12	0.14	0.22	(0.22)	(0.20)	(0.02)	0.77	0.14	0.17	0.14	0.20	0.33	
302	NYCERS-TOTAL INVESTMENT GRADE CORPORATE - GROSS	4,337		(0.08)	1.77	3.66	(14.52)	(16.27)	(0.88)	10.14	1.77	(3.37)	1.80	2.75	6.20	01/01/1987
	ESTIMATED INVESTMENT FEES			(0.02)	(0.08)	(0.04)	(0.06)	(0.06)	(0.09)	(0.10)	(0.08)	(0.08)	(0.09)			
	NYCERS-TOTAL INVESTMENT GRADE CORPORATE - NET MGR			(0.10)	1.69	3.62	(14.58)	(16.33)	(0.97)	10.04	1.69	(3.44)	1.71			
	NYC CUSTOM IGC BENCHMARK			(0.29)	1.55	3.21	(14.19)	(15.76)	(0.85)	9.70	1.55	(3.43)	1.62	2.45		
	EXCESS RETURN			0.19	0.14	0.41	(0.39)	(0.56)	(0.12)	0.34	0.14	(0.01)	0.09	0.31		
312	NYCERS-TOTAL CORE FI- DEVELOPING MGRS - GROSS	552	0.69	(0.51)	0.50	2.76	(10.58)	(12.45)	(1.05)	9.11	0.50	(2.73)	1.51	2.12	3.44	05/01/2009
	ESTIMATED INVESTMENT FEES			(0.04)	(0.18)	(0.09)	(0.16)	(0.16)	(0.17)	(0.19)	(0.17)	(0.17)	(0.18)			
	NYCERS-TOTAL CORE FI- DEVELOPING MGRS - NET MGR			(0.55)	0.32	2.66	(10.74)	(12.60)	(1.22)	8.91	0.32	(2.90)	1.33			
	BLOOMBERG U.S. AGGREGATE			(0.84)	(0.94)	2.09	(10.29)	(13.01)	(1.54)	7.51	(0.94)	(3.96)	0.77	1.52	2.56	
	EXCESS RETURN			0.29	1.26	0.57	(0.45)	0.41	0.32	1.41	1.26	1.06	0.57	0.61	0.88	

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Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
FIXED INCOME RETURN DETAIL																
334	NYCERS-TOTAL TIPS - GROSS	2,676	3.33	(1.39)	(1.39)	2.02	(5.12)	(11.90)	5.87	10.94	(1.39)	(0.13)	2.48	2.12	3.42	06/01/2005
	ESTIMATED INVESTMENT FEES			(0.00)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)			
	NYCERS-TOTAL TIPS - NET MGR			(1.40)	(1.41)	2.01	(5.14)	(11.92)	5.85	10.92	(1.41)	(0.15)	2.46			
	BLOOMBERG GLOBAL INFL-LINKED: U.S. TIPS			(1.42)	(1.40)	1.87	(5.14)	(11.85)	5.96	10.99	(1.40)	(0.12)	2.49	2.08	3.31	
	EXCESS RETURN			0.02	(0.01)	0.14	(0.00)	(0.07)	(0.10)	(0.07)	(0.01)	(0.03)	(0.03)	0.04	0.11	
344	NYCERS- TOTAL CONVERTIBLE BONDS - GROSS	1,458	1.81	2.66	8.47	5.33	(13.51)	(10.89)	4.88	16.57	8.47	4.87	5.49	6.55	6.22	06/01/2008
	ESTIMATED INVESTMENT FEES			(0.10)	(0.41)	(0.19)	(0.31)	(0.33)	(0.37)	(0.47)	(0.41)	(0.39)	(0.40)			
	NYCERS-TOTAL CONVERTIBLE BONDS - NET MGR			2.56	8.06	5.14	(13.81)	(11.21)	4.52	16.10	8.06	4.48	5.09			
	ICE BOFA ALL US CONV EX MANDATORY			4.98	11.06	9.37	(22.73)	(19.58)	4.12	52.05	11.06	8.29	10.07	10.42	9.10	
	EXCESS RETURN			(2.42)	(2.99)	(4.23)	8.92	8.37	0.39	(35.95)	(2.99)	(3.81)	(4.97)	(3.87)	(2.88)	
354	NYCERS-TOTAL TARGETED INVESTMENTS (NO CASH) - GROSS	828	1.03	(1.38)	(0.29)	2.00	(8.78)	(11.03)	(0.66)	7.35	(0.29)	(2.81)	1.72	2.84	7.02	12/01/1984
	ESTIMATED INVESTMENT FEES			(0.04)	(0.16)	(0.08)	(0.14)	(0.14)	(0.15)	(0.16)	(0.16)	(0.15)	(0.16)	(0.11)	(0.11)	
	NYCERS-TOTAL TARGETED INVESTMENTS (NO CASH) - NET MGR			(1.42)	(0.45)	1.92	(8.92)	(11.16)	(0.80)	7.19	(0.45)	(2.95)	1.56	2.66	6.91	
	EMPLOYEES CUSTOM BENCHMARK (NO CASH)			(0.61)	(0.75)	2.07	(8.97)	(11.43)	(1.03)	5.79	(0.75)	(3.36)	0.77	1.63		
	EXCESS RETURN			(0.80)	0.30	(0.14)	0.06	0.27	0.22	1.40	0.30	0.40	0.79	1.03		
364	NYCERS-TOTAL HIGH YIELD - GROSS	3,268	4.06	1.62	9.63	5.47	(11.92)	(9.97)	5.61	7.18	9.63	3.69	3.83	4.57	7.02	10/01/1994
	ESTIMATED INVESTMENT FEES			(0.08)	(0.34)	(0.16)	(0.27)	(0.27)	(0.33)	(0.34)	(0.34)	(0.32)	(0.32)			
	NYCERS-TOTAL HIGH YIELD - NET MGR			1.55	9.29	5.31	(12.19)	(10.24)	5.28	6.84	9.29	3.37	3.51			
	HIGH YIELD CUSTOM BENCHMARK			1.75	9.07	5.38	(12.82)	(11.18)	5.26	7.05	9.07	3.12	3.34	4.20	6.26	
	EXCESS RETURN			(0.21)	0.22	(0.08)	0.64	0.94	0.02	(0.21)	0.22	0.24	0.16	0.37	0.76	
374	NYCERS- TOTAL BANK LOANS - GROSS	3	0.00						(4.29)	1.24						12/01/2012
	ESTIMATED INVESTMENT FEES								0.09	(0.32)						
	NYCERS-TOTAL BANK LOANS - NET MGR								(4.20)	0.92						
	CSFB LEVERAGED LOAN INDEX						(2.68)	(1.06)	5.40	2.78						
	EXCESS RETURN								(9.59)	(1.86)						
384	NYCERS-TOTAL OPPORTUNISTIC FIXED INCOME - GROSS	3,547	4.41	1.96	3.98	4.69	8.41	0.93	17.98	5.30	3.98	11.14	7.23	6.94	7.61	10/01/2007
	ESTIMATED INVESTMENT FEES			(0.08)	(0.40)	(0.24)	(0.26)	(0.26)	(0.29)	(0.15)	(0.40)	(0.30)	(0.24)			
	NYCERS-TOTAL OPPORTUNISTIC FIXED INCOME - NET MGR			1.88	3.58	4.44	8.15	0.67	17.69	5.15	3.58	10.84	6.99			
	OPPORTUNISTIC FIXED INCOME JPMGHY / CSFB 50/50 BLEND PLUS 300			3.22	13.02	7.42	(4.95)	(2.79)	8.29	7.22	13.02	8.03	6.80	7.45	8.41	
	EXCESS RETURN			(1.34)	(9.44)	(2.97)	13.10	3.46	9.40	(2.07)	(9.44)	2.81	0.19	(0.51)	(0.80)	
CASH SUMMARY																
396	Short Term NYCERS - GROSS	292	0.36	1.24	3.72	2.35	(0.00)	1.33	0.06	0.50	3.72	1.27	1.52	1.10		04/01/1982
	ESTIMATED INVESTMENT FEES			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	Short Term NYCERS - NET MGR			1.24	3.72	2.35	(0.00)	1.33	0.06	0.50	3.72	1.27	1.52	1.10		
400	Cash Account	1	0.00													
402	Securities Lending	0	0.00													



**New York City
Employees' Retirement System**

Appendix B

Public Markets Manager Performance Detail

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
EQUITY SUMMARY										
US EQUITY										
BlackRock US SCG R2000	\$7	0.01	6.98	20.61	15.12	(26.48)	4.30	34.46	28.51	(9.18)
RUSSELL 2000 GROWTH DAILY			7.05	18.53	13.55	(26.36)	2.83	34.63	28.48	(9.31)
Excess			(0.08)	2.08	1.57	(0.12)	1.47	(0.18)	0.03	0.12
BlackRock US SCV R2000	\$65	0.08	3.10	6.16	2.50	(14.80)	28.29	4.51	23.52	(12.77)
RUSSELL 2000 VALUE DAILY			3.18	6.01	2.50	(14.48)	28.27	4.63	22.39	(12.86)
Excess			(0.08)	0.15	(0.01)	(0.31)	0.02	(0.13)	1.13	0.09
Cooke and Bieler-US SCV	\$108	0.13	7.34	16.09	11.48	(17.98)	18.07	9.20		
RUSSELL 2000 VALUE DAILY			3.18	6.01	2.50	(14.48)	28.27	4.63		
Excess			4.16	10.08	8.97	(3.50)	(10.20)	4.57		
Pzena-US SCV	\$166	0.21	4.18	17.11	6.78	(5.47)	25.71	(1.19)		
RUSSELL 2000 VALUE DAILY			3.18	6.01	2.50	(14.48)	28.27	4.63		
Excess			1.00	11.10	4.28	9.01	(2.56)	(5.83)		
PanAgora-US SCC	\$179	0.22	4.89	16.73	7.96	(19.16)	20.99			
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(20.44)	14.82			
Excess			(0.31)	4.43	(0.12)	1.27	6.17			
Wellington US SCC	\$315	0.39	5.50	16.02	11.57	(24.12)	14.49	28.10	32.98	(10.09)
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(20.44)	14.82	19.96	25.52	(11.01)
Excess			0.30	3.71	3.49	(3.68)	(0.33)	8.14	7.46	0.93
Wasatch-US SCG	\$169	0.21	6.72	17.91	16.23	(30.91)	19.41	38.38		
RUSSELL 2000 GROWTH DAILY			7.05	18.53	13.55	(26.36)	2.83	34.63		
Excess			(0.33)	(0.62)	2.67	(4.55)	16.57	3.75		

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
William Blair-US SCG	\$163	0.20	5.23	22.30	12.49	(22.06)	13.96			
RUSSELL 2000 GROWTH DAILY			7.05	18.53	13.55	(26.36)	2.83			
Excess			(1.82)	3.77	(1.06)	4.30	11.13			
BlackRock US LMC R1000 Core	\$13,765	17.11	8.62	19.20	16.78	(19.81)	26.40	21.30	31.44	
RUSSELL 1000 (DAILY)			8.58	19.36	16.68	(19.13)	26.45	20.96	31.43	
Excess			0.04	(0.16)	0.10	(0.69)	(0.05)	0.33	0.02	
PIMCO RAFI US LMCE	\$2,415	3.00	2.27	15.59	5.44	(6.26)	28.18	4.50	25.33	(6.90)
RUSSELL 1000 (DAILY)			8.58	19.36	16.68	(19.13)	26.45	20.96	31.43	(4.78)
Excess			(6.31)	(3.77)	(11.24)	12.86	1.72	(16.47)	(6.09)	(2.11)
Legal General US LMCE	\$2,058	2.56	3.36	13.01	7.05	(12.21)	22.23	9.60		
RUSSELL 1000 (DAILY)			8.58	19.36	16.68	(19.13)	26.45	20.96		
Excess			(5.22)	(6.35)	(9.63)	6.92	(4.22)	(11.37)		
Earnest-US MCC	\$151	0.19	3.79	10.77	8.39					
RUSSELL MIDCAP (DAILY)			4.76	14.92	9.01					
Excess			(0.97)	(4.16)	(0.62)					
Victory-US MCV	\$183	0.23	2.31	14.03	4.28					
RUSSELL MIDCAP VALUE (DAILY)			3.86	10.50	5.23					
Excess			(1.55)	3.53	(0.95)					
MFS-US MCG	\$174	0.22	5.96	16.17	12.91					
RUSSELL MIDCAP GROWTH (DAILY)			6.23	23.13	15.94					
Excess			(0.27)	(6.96)	(3.03)					
Westfield-US MCG	\$176	0.22	8.55	22.51	18.75					
RUSSELL MIDCAP GROWTH (DAILY)			6.23	23.13	15.94					
Excess			2.32	(0.62)	2.81					

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
SSGA-US LC Russell TOP 200 Core	\$1,832	2.28	9.54	21.09	19.57					
RUSSELL TOP 200 INDEX (DAILY)			9.89	20.88	19.42					
Excess			(0.35)	0.22	0.15					
FUND OF FUNDS										
NYCERS-TOTAL FUND OF FUNDS	\$167	0.21	2.87	13.17	8.33	(16.47)	24.80	19.46	23.40	(8.23)
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(20.44)	14.82	19.96	25.52	(11.01)
Excess			(2.33)	0.86	0.24	3.97	9.98	(0.50)	(2.12)	2.78
NYCERS-TOTAL LEGATO	\$167	0.21	2.87	13.17	8.33	(16.47)	24.80	19.46	23.40	(8.17)
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(20.44)	14.82	19.96	25.52	(11.01)
Excess			(2.33)	0.86	0.24	3.97	9.98	(0.50)	(2.12)	2.84
NON - US EQUITY										
Causeway WorldxUS LMCC	\$1,490	1.85	5.70	31.47	21.66	(10.16)	9.86	4.77	23.48	(18.52)
NYC Developed Value Benchmark ^[1]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			2.67	14.05	10.37	4.13	(2.76)	(2.82)	0.99	(4.43)
Sprucegrove WorldxUS LMCC	\$1,553	1.93	5.01	23.24	15.83	(14.64)	8.31	4.92	17.97	(13.93)
NYC Developed Value Benchmark ^[1]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			1.98	5.82	4.54	(0.35)	(4.32)	(2.66)	(4.52)	0.16
Baillie Gifford WorldxUS LMCC	\$1,333	1.66	1.95	22.51	17.76	(38.86)	(5.49)	65.71	36.40	(12.79)
NYC Developed Growth Benchmark ^[2]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			(1.08)	5.10	6.47	(24.57)	(18.12)	58.13	13.91	1.30
Walter Scott WorldxUS LMCC	\$1,671	2.08	3.64	22.61	17.57	(23.27)	13.17	21.21	28.56	(7.16)
NYC Developed Growth Benchmark ^[2]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			0.61	5.19	6.28	(8.98)	0.54	13.63	6.07	6.93
Acadian WorldxUS SCC	\$570	0.71	0.59	14.19	7.95	(19.32)	22.00	15.95	24.57	(19.03)
S&P EPAC Small Cap USD NET			0.17	10.76	6.71	(22.69)	8.06	13.78	23.71	(18.58)
Excess			0.42	3.43	1.24	3.37	13.94	2.16	0.86	(0.45)

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
Alger EAFE SCC	\$130	0.16	(0.60)	12.46	5.54	(21.32)	11.74	9.65		
MSCI EAFE SMALL CAP NET (DAILY)			0.58	10.18	5.53	(21.39)	10.10	12.34		
Excess			(1.18)	2.29	0.01	0.07	1.64	(2.69)		
SSGA WorldxUS LMC NYC Custom IDX	\$1,343	1.67	3.49	17.54	12.15	(15.49)	12.33	8.08	22.55	(13.65)
NYC Custom World ex US Index ^[3]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			0.46	0.13	0.86	(1.20)	(0.30)	0.49	0.06	0.44
SSGA WorldxUS SC Custom IDX ^[4]	\$583	0.72	0.62	10.33	5.77	(20.85)	11.02	13.26	25.44	(17.72)
World ex USA SC PASSIVE CUSTOM BM ^[5]			0.49	10.05	5.50	(20.58)	11.14	12.78	25.41	(18.07)
Excess			0.14	0.29	0.27	(0.27)	(0.12)	0.48	0.03	0.35
EMERGING MARKETS										
Baillie Gifford EM	\$732	0.91	3.15	7.19	10.81	(30.74)	(10.77)	35.23	24.53	(14.40)
ERS Baillie Gifford EM Custom Benchmark			0.90	1.75	4.89	(20.09)	(2.54)	8.26	15.10	(13.38)
Excess			2.26	5.44	5.92	(10.64)	(8.23)	26.96	9.43	(1.02)
Acadian EM	\$728	0.90	3.65	8.52	11.07	(20.80)	7.75	7.84	12.83	(17.60)
ERS Acadian EM Custom Benchmark			0.90	1.75	4.89	(20.09)	(2.54)	11.17	15.10	(13.38)
Excess			2.75	6.78	6.18	(0.71)	10.30	(3.33)	(2.28)	(4.22)
AQR-EM SCC	\$202	0.25	6.80	14.86	10.30	(14.30)	20.73			
MSCI EM Small Cap - Net Return			6.39	13.28	10.50	(18.02)	18.75			
Excess			0.41	1.58	(0.20)	3.72	1.98			
Parametric EM	\$0	0.00							10.92	(14.77)
NYCERS Custom EM Index ^[6]									15.10	(13.38)
Excess									(4.18)	(1.38)
Pzena-EM ACV	\$358	0.44	5.74	16.81	12.78	(5.06)				
MSCI EMERGING MARKETS			0.90	1.75	4.89	(20.09)				
Excess			4.85	15.06	7.89	15.04				

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
RBC-EM ACG	\$243	0.30	3.08	10.21	9.36	(14.18)				
MSCI EMERGING MARKETS			0.90	1.75	4.89	(20.09)				
Excess			2.18	8.46	4.47	5.91				
Sands-EM LCG	\$187	0.23	3.48	7.65	10.05	(33.98)				
MSCI EMERGING MARKETS			0.90	1.75	4.89	(20.09)				
Excess			2.58	5.90	5.17	(13.89)				
UBS-EM ACC	\$208	0.26	1.39	3.01	5.31	(26.03)				
MSCI EMERGING MARKETS			0.90	1.75	4.89	(20.09)				
Excess			0.49	1.26	0.42	(5.94)				
DFA EM	\$568	0.71	3.83	7.57	8.20	(13.00)	9.07	10.08	9.04	(13.70)
NYCERS Custom EM Index ^[6]			0.90	1.75	4.89	(20.09)	(1.45)	14.99	15.10	(13.38)
Excess			2.93	5.83	3.31	7.09	10.52	(4.90)	(6.06)	(0.31)
BlackRock MSCI EM Core	\$624	0.78	1.02	2.23	5.43	(19.95)	(3.01)	14.79	15.10	(12.86)
NYCERS Custom Passive EM Index ^[7]			0.90	1.75	4.89	(20.09)	(1.45)	14.99	15.10	(12.97)
Excess			0.13	0.48	0.54	0.14	(1.57)	(0.20)	(0.00)	0.11
INTERNATIONAL FOF										
NYCERS-TOTAL INTERNATIONAL FOF	\$653	0.81	2.35	13.99	10.78	(20.73)	9.75	13.90	25.04	(16.27)
NYC Blended Custom Benchmark for FoF (ERS) ^[8]			2.38	12.47	9.10	(16.58)	8.95	9.45	21.73	(14.39)
Excess			(0.03)	1.52	1.68	(4.15)	0.80	4.45	3.30	(1.88)
NYCERS-TOTAL INTERNATIONAL BIVIUM	\$220	0.27	1.94	14.53	10.68	(19.59)	12.22	13.13	25.89	(18.08)
NYC Blended Custom Benchmark for FoF (ERS) ^[8]			2.38	12.47	9.10	(16.58)	8.95	9.45	21.73	(14.39)
Excess			(0.44)	2.06	1.58	(3.01)	3.27	3.68	4.15	(3.69)
NYCERS-TOTAL INTERNATIONAL XPONANCE	\$217	0.27	2.71	14.34	10.57	(17.85)	8.70	12.37	21.96	(14.84)
NYC Blended Xponance Benchmark for ERS ^[9]			2.38	12.47	9.10	(16.58)	8.83	9.45	21.73	(14.39)
Excess			0.33	1.87	1.47	(1.26)	(0.12)	2.91	0.23	(0.45)

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
NYCERS-TOTAL INTERNATIONAL LEADING EDGE	\$215	0.27	2.45	13.22	11.13	(24.47)	8.40	16.02	27.30	(15.78)
NYC Blended Custom Benchmark for FoF (ERS) ^(B)			2.38	12.47	9.10	(16.58)	8.95	9.45	21.73	(14.39)
Excess			0.07	0.75	2.03	(7.89)	(0.55)	6.57	5.56	(1.39)
GLOBAL EQUITY										
Fiera-Global	\$377	0.47	5.56	20.70	14.16	(17.83)	26.27	20.53	34.10	
MSCI World Index			6.83	18.51	15.09	(18.14)	21.82	15.90	27.67	
Excess			(1.27)	2.19	(0.93)	0.31	4.45	4.63	6.43	
Nordea-Global MCG	\$174	0.22	1.98	14.34	9.55					
MSCI World Index			6.83	18.51	15.09					
Excess			(4.85)	(4.17)	(5.54)					
Morgan Stanley-Global	\$151	0.19	11.55	37.08	34.55	(40.38)				
MSCI AC WORLD (Daily Const)			6.18	16.53	13.93	(18.36)				
Excess			5.38	20.55	20.62	(22.01)				
Pictet-Global ACC	\$184	0.23	4.86		14.06					
MSCI World Index			6.83		15.09					
Excess			(1.97)		(1.03)					
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
PIMCO MORT	\$1,282	1.59	(0.45)	(1.47)	2.15	(12.75)	(1.34)			
Bloomberg US Mortgage Backed Securities			(0.64)	(1.52)	1.87	(11.81)	(1.04)			
Excess			0.19	0.05	0.28	(0.94)	(0.30)			
Wellington Mortgages	\$661	0.82	(0.62)	(1.44)	2.20	(11.90)	(0.95)			
Bloomberg US Mortgage Backed Securities			(0.64)	(1.52)	1.87	(11.81)	(1.04)			
Excess			0.03	0.08	0.34	(0.09)	0.10			

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
BlackRock Mortgages	\$2,070	2.57	(0.54)	(1.28)	2.03	(11.60)	(0.89)	4.86	7.00	0.96
NYC Custom Mortgage Benchmark ^[10]			(0.64)	(1.52)	1.87	(11.81)	(1.04)	3.91	6.68	1.01
Excess			0.10	0.24	0.16	0.21	0.15	0.95	0.33	(0.05)
Ramirez-Mortgages - Bivium	\$30	0.04	(0.66)		1.57					
Bloomberg US Mortgage Backed Securities			(0.64)		1.87					
Excess			(0.01)		(0.30)					
Semper-Mortgages - Bivium	\$31	0.04	(0.67)		1.87					
Bloomberg US Mortgage Backed Securities			(0.64)		1.87					
Excess			(0.03)		0.00					
T Rowe Price-Corporate	\$1,469	1.83	(0.15)	1.68	3.78	(16.63)	(0.74)	9.39	14.52	(2.41)
NYC Custom IGC Benchmark ^[11]			(0.29)	1.55	3.21	(15.76)	(0.85)	9.70	13.40	(1.90)
Excess			0.13	0.13	0.57	(0.87)	0.10	(0.31)	1.13	(0.51)
Voya-Corporate	\$822	1.02	(0.03)	2.31	4.09	(16.28)				
Bloomberg U.S. Corporate Inv Grade			(0.29)	1.55	3.21	(15.76)				
Excess			0.26	0.76	0.88	(0.52)				
Neuberger Berman-Corporate	\$1,066	1.33	0.00	2.17	3.65	(16.15)				
Bloomberg U.S. Corporate Inv Grade			(0.29)	1.55	3.21	(15.76)				
Excess			0.29	0.62	0.45	(0.39)				
Pinebridge-Corporate	\$918	1.14	(0.20)	0.59	2.79	(15.67)				
NYC Custom IGC Benchmark ^[11]			(0.29)	1.55	3.21	(15.76)				
Excess			0.09	(0.96)	(0.41)	0.09				
Barksdale-Credit - Bivium	\$21	0.03	(0.23)		3.36					
Bloomberg U.S. Corporate Inv Grade			(0.29)		3.21					
Excess			0.05		0.16					

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
Ducenta Squared-Credit - Bivium	\$20	0.03	(0.50)		3.10					
Bloomberg U.S. Corporate Inv Grade			(0.29)		3.21					
Excess			(0.22)		(0.11)					
Integrity-Credit - Bivium	\$21	0.03	(0.85)		2.88					
Bloomberg U.S. Corporate Inv Grade			(0.29)		3.21					
Excess			(0.56)		(0.32)					
BlackRock LI Treasury	\$931	1.16	(1.89)	(4.16)	2.94	(20.57)	(3.88)	12.48	10.41	(0.19)
NYC - Treasury Agency Plus Five			(1.94)	(4.60)	2.86	(20.58)	(3.78)	12.85	10.40	(0.05)
Excess			0.06	0.44	0.09	0.01	(0.10)	(0.38)	0.01	(0.14)
HGK Asset Management-LI Treasury- Bivium	\$31	0.04	(2.02)		2.77					
NYC - Treasury Agency Plus Five			(1.94)		2.86					
Excess			(0.08)		(0.09)					
New Century-LI Treasury - Bivium	\$31	0.04	(2.00)		2.66					
NYC - Treasury Agency Plus Five			(1.94)		2.86					
Excess			(0.06)		(0.19)					
SSGA LI Treasury	\$589	0.73	(1.82)	(4.37)	2.96	(20.73)	(3.69)	13.02	10.53	(0.18)
NYC - Treasury Agency Plus Five			(1.94)	(4.60)	2.86	(20.58)	(3.78)	12.85	10.40	(0.05)
Excess			0.12	0.23	0.11	(0.15)	0.09	0.16	0.13	(0.13)
SSGA ST Treasury 1-3Y	\$2,077	2.58	(0.56)	0.26	1.06	(3.69)	(0.63)	3.10	3.54	1.52
FTSE US Government Bond 1-3 Years Index			(0.56)	0.16	1.04	(3.74)	(0.58)	3.09	3.56	1.56
Excess			0.00	0.10	0.02	0.05	(0.05)	0.01	(0.02)	(0.04)
SSGA LT Treasury 10Y Plus	\$644	0.80	(2.32)	(6.85)	4.55	(29.56)				
FTSE US Government Bond 10+ Years Index			(2.30)	(7.50)	4.39	(29.75)				
Excess			(0.03)	0.66	0.16	0.18				

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
SSGA IT Treasury 1-10Y ^[12]	\$2,695	3.35	(1.14)	(0.98)	1.23	(7.72)	(1.70)	4.55	5.09	2.05
USBIG TSY AGN 1-10			(1.11)	(1.08)	1.26	(7.79)	(1.66)	5.72	5.18	1.42
Excess			(0.02)	0.10	(0.03)	0.06	(0.04)	(1.17)	(0.09)	0.63
HIGH YIELD										
Oaktree High Yield	\$447	0.56	1.57	9.26	4.68	(9.75)	4.95	7.15	13.98	(3.46)
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	(2.08)
Excess			(0.18)	0.19	(0.70)	1.43	(0.31)	0.10	(0.34)	(1.38)
Pinebridge High Yield	\$376	0.47	1.72	9.74	5.59	(11.49)	4.77			
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26			
Excess			(0.03)	0.67	0.21	(0.31)	(0.49)			
Neuberger Berman High Yield	\$467	0.58	1.24	8.22	4.41	(11.21)	4.31	6.04	14.15	(2.00)
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	(2.08)
Excess			(0.51)	(0.85)	(0.97)	(0.03)	(0.95)	(1.01)	(0.17)	0.08
Stone Harbor High Yield	\$4	0.00							14.12	(2.62)
Bloomberg U.S. HY - 2% Issuer Cap									14.32	(2.08)
Excess									(0.20)	(0.53)
T Rowe Price High Yield	\$510	0.63	1.66	9.40	5.47	(11.00)	6.32	7.03	15.63	(2.36)
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	(2.08)
Excess			(0.09)	0.33	0.09	0.18	1.06	(0.02)	1.32	(0.28)
Shenkman High Yield	\$420	0.52	1.87	9.92	5.77	(8.40)	4.40	6.37	14.32	(3.21)
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	(2.08)
Excess			0.12	0.84	0.39	2.78	(0.86)	(0.68)	0.01	(1.12)
Eaton Vance High Yield	\$329	0.41	1.19	9.07	5.17	(9.43)	5.05	5.98	14.56	
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	
Excess			(0.56)	0.00	(0.22)	1.75	(0.21)	(1.07)	0.24	

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
Mackay Shields High Yield	\$366	0.45	1.18	8.76	5.31	(9.11)	5.49	8.04	14.19	
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	
Excess			(0.57)	(0.31)	(0.07)	2.07	0.23	0.99	(0.13)	
Nomura High Yield	\$350	0.43	1.83	10.22	6.26	(10.80)	7.12	8.17	13.37	
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	
Excess			0.07	1.15	0.88	0.38	1.86	1.12	(0.95)	
BANK LOANS										
Barings Bank Loans	\$1	0.00						1.12	7.82	0.38
CSFB LEVERAGED LOAN INDEX								2.78	8.17	1.14
Excess								(1.66)	(0.36)	(0.76)
Credit Suisse Bank Loans	\$0	0.00						1.81	8.31	1.04
CSFB LEVERAGED LOAN INDEX								2.78	8.17	1.14
Excess								(0.96)	0.13	(0.10)
Invesco Bank Loans	\$1	0.00					(0.63)	(0.42)	8.60	0.17
CSFB LEVERAGED LOAN INDEX							5.40	2.78	8.17	1.14
Excess							(6.03)	(3.19)	0.42	(0.97)
Bain Bank Loans	\$1	0.00								
CSFB LEVERAGED LOAN INDEX										
Excess										
TIPS										
SSGA TIPS	\$2,065	2.57	(1.45)	(1.46)	1.97	(11.93)	5.91	10.88	8.44	(1.30)
Bloomberg Global Infi-Linked: U.S. TIPS			(1.42)	(1.40)	1.87	(11.85)	5.96	10.99	8.43	(1.26)
Excess			(0.03)	(0.06)	0.10	(0.08)	(0.05)	(0.11)	0.02	(0.04)
BlackRock TIPS	\$611	0.76	(1.37)	(1.39)	2.02	(11.90)	5.72	11.01	8.42	(1.18)
Bloomberg Global Infi-Linked: U.S. TIPS			(1.42)	(1.40)	1.87	(11.85)	5.96	10.99	8.43	(1.26)
Excess			0.05	0.01	0.15	(0.05)	(0.23)	0.02	(0.01)	0.08

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
CONVERTIBLE BONDS										
Advent Convertible Bonds	\$896	1.11	2.78	9.05	5.23	(11.59)	0.39	17.21	12.71	(1.64)
ICE BofA US Convertibles - Yield Alter			3.82	10.92	7.72	(13.77)	2.09	13.34	15.40	(0.42)
Excess			(1.04)	(1.87)	(2.49)	2.18	(1.70)	3.87	(2.69)	(1.22)
Victory Convertible Bonds	\$562	0.70	2.22	6.52	4.99	(10.61)	11.91	14.91	20.49	0.66
ICE BofA All IG US Convertibles			1.58	3.35	1.10	(7.73)	10.42	7.57	20.88	3.35
Excess			0.64	3.17	3.90	(2.87)	1.49	7.35	(0.39)	(2.69)
CORE FI - DEVELOPING MANAGERS										
LM Capital-Core Plus	\$322	0.40	(0.57)	0.36	2.64	(12.42)	(1.41)	9.60	9.70	(1.14)
Bloomberg U.S. Aggregate			(0.84)	(0.94)	2.09	(13.01)	(1.54)	7.51	8.72	0.01
Excess			0.27	1.30	0.55	0.59	0.13	2.10	0.99	(1.15)
GIA-Core Plus	\$183	0.23	(0.51)	0.38	2.71	(12.73)	(0.88)	7.85	9.69	(0.81)
Bloomberg U.S. Aggregate			(0.84)	(0.94)	2.09	(13.01)	(1.54)	7.51	8.72	0.01
Excess			0.33	1.32	0.61	0.28	0.66	0.34	0.97	(0.82)
Pugh-CorePlus	\$47	0.06	(0.57)	(0.21)	2.64	(13.32)	(1.29)			
Bloomberg U.S. Aggregate			(0.84)	(0.94)	2.09	(13.01)	(1.54)			
Excess			0.27	0.72	0.55	(0.31)	0.25			
ECONOMICALLY TARGETED INVESTMENTS										
AFL-CIO Housing Investment Trust	\$309	0.38	(0.90)	(2.23)	1.94	(13.55)	(1.04)	6.20	7.78	0.16
Bloomberg U.S. Aggregate			(0.84)	(0.94)	2.09	(13.01)	(1.54)	7.51	8.72	0.01
Excess			(0.05)	(1.29)	(0.15)	(0.54)	0.50	(1.31)	(0.94)	0.15
RBC Access MBS	\$148	0.18	(0.79)	(1.64)	1.79	(12.00)	(1.03)	6.14	7.21	0.49
Access RBC Benchmark			(0.76)	(1.37)	1.64	(10.38)	(1.46)	4.69	6.05	1.17
Excess			(0.04)	(0.27)	0.15	(1.61)	0.43	1.45	1.16	(0.69)

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
CPC Construction Facility	\$14	0.02	0.61	7.17	4.83	3.79	3.88	0.67	6.86	4.14
CPC CONST BENCHMARK			1.50	5.33	2.93	3.75	2.42	2.73	4.09	3.99
Excess			(0.88)	1.84	1.90	0.03	1.46	(2.05)	2.77	0.15
BOA PPAR FNMA	\$10	0.01	(2.63)	2.02	1.61	(8.50)	(1.89)	6.12	13.54	2.33
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(2.18)	2.60	(0.53)	2.78	(1.52)	0.98	5.74	0.47
BOA PPAR GNMA	\$12	0.02	(1.68)	1.03	1.24	(6.61)	(1.18)	7.45	8.44	2.42
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(1.29)	1.44	(1.04)	3.53	(0.36)	3.14	1.70	0.79
Citibank PPAR FNMA	\$18	0.02	(2.64)	1.40	1.96	(11.34)	(1.56)	7.06	19.71	2.63
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(2.19)	1.98	(0.19)	(0.06)	(1.19)	1.92	11.91	0.77
Citibank PPAR GNMA	\$5	0.01	(1.31)	2.45	1.83	(5.04)	(1.10)	8.31	5.33	1.90
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.92)	2.85	(0.45)	5.10	(0.29)	4.00	(1.41)	0.27
CFSB PPAR FNMA	\$0	0.00	(2.85)	1.03	1.95	(12.29)	(2.05)			
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)			
Excess			(2.41)	1.62	(0.20)	(1.01)	(1.67)			
CFSB PPAR GNMA	\$2	0.00	(1.31)	1.83	1.74	(5.29)	0.03	8.01	5.91	0.99
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.92)	2.23	(0.53)	4.85	0.84	3.69	(0.82)	(0.65)
CPC PPAR FNMA	\$104	0.13	(2.39)	1.51	1.99	(10.21)	1.14	7.00	13.18	2.31
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(1.94)	2.10	(0.16)	1.07	1.51	1.87	5.38	0.45

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
CPC PPAR GNMA	\$51	0.06	(1.21)	2.08	1.91	(5.01)	(0.51)	7.95	4.76	0.86
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.82)	2.48	(0.37)	5.13	0.31	3.63	(1.97)	(0.77)
ECLF PPAR FNMA	\$2	0.00	(2.85)	1.26	2.02	(11.97)	(1.65)			
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)			
Excess			(2.40)	1.84	(0.13)	(0.69)	(1.28)			
JPMC PPAR FNMA	\$84	0.10	(2.60)	0.34	1.70	(11.48)	(1.84)	8.33	14.68	1.68
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(2.16)	0.92	(0.45)	(0.21)	(1.47)	3.19	6.88	(0.18)
JPMC PPAR GNMA	\$23	0.03	(1.05)	2.38	1.99	(4.54)	0.35	8.29	5.77	1.99
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.66)	2.78	(0.29)	5.60	1.17	3.97	(0.97)	0.36
LIIF PPAR FNMA	\$10	0.01	(2.61)	2.64	1.89	(9.29)	(1.75)	6.44	16.35	2.27
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(2.16)	3.22	(0.25)	1.99	(1.37)	1.30	8.55	0.41
LIIF PPAR GNMA	\$2	0.00	1.87	4.69	4.06	(2.79)	0.84	6.19	5.54	2.53
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			2.26	5.09	1.78	7.35	1.65	1.87	(1.19)	0.89
LISC PPAR FNMA	\$5	0.01	(2.89)	(4.11)	1.96	(16.45)	(1.69)	31.93	14.95	
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	
Excess			(2.45)	(3.52)	(0.18)	(5.17)	(1.32)	26.80	7.15	
NCBCI PPAR FNMA	\$0	0.00	(1.10)	2.26	1.95	(4.39)	0.66	8.49	4.08	2.00
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(0.65)	2.85	(0.19)	6.89	1.03	3.36	(3.72)	0.15

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
NCBCI PPAR GNMA	\$1	0.00	(1.06)	2.16	1.91	(4.17)	0.95	8.16	3.69	1.23
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.67)	2.56	(0.37)	5.97	1.77	3.85	(3.04)	(0.41)
NHS PPAR GNMA	\$0	0.00	(0.90)	2.61	2.16	(3.56)	1.26	7.11	2.90	0.54
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.51)	3.01	(0.12)	6.58	2.08	2.80	(3.84)	(1.09)
Wells Fargo PPAR FNMA	\$27	0.03	(2.92)	1.40	1.92	(11.70)	(1.86)	28.61	21.71	
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	
Excess			(2.47)	1.98	(0.22)	(0.42)	(1.48)	23.48	13.91	
CASH										
Short Term NYCERS	\$292	0.36	1.24	3.72	2.35	1.33	0.06	0.50	2.30	1.95
ICE BofA US 3-Month Treasury Bill			1.17	3.59	2.25	1.46	0.05	0.67	2.28	1.87
Excess			0.08	0.12	0.10	(0.12)	0.01	(0.17)	0.01	0.07
Cash Account	\$1	0.00								
Securities Lending	\$0	0.00								



**New York City
Employees' Retirement System**

Appendix C

Alternative Assets Manager Performance Detail

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
TOTAL PRIVATE EQUITY		16,873,731,569	13,788,775,262	13,476,035,425	8,301,694,932	1.58x	11.1%
TOTAL LIQUIDATED		1,622,629,305	1,805,711,636	2,286,565,879	228,465	1.27x	5.7%
TOTAL ACTIVE		15,251,102,263	11,983,063,626	11,189,469,546	8,301,466,467	1.63x	12.6%
TOTAL ACTIVE							
Cypress Merchant Banking Partners II, L.P.	1999	45,172,972	53,944,269	50,584,154	18,474	0.94x	-1.2%
Lincolnshire Equity Fund II, L.P.	1999	18,397,347	19,261,466	37,755,344	70,457	1.96x	24.6%
SCP Private Equity Partners II, L.P.	2000	27,442,463	30,827,225	10,819,873	667,027	0.37x	-12.8%
Apollo Investment Fund V, L.P.	2001	40,000,000	62,528,643	123,295,865	340,844	1.98x	38.6%
Ares Corporate Opportunities Fund, L.P.	2003	45,000,000	53,984,770	80,476,920	54,178	1.49x	13.1%
Blackstone Capital Partners IV, L.P.	2003	34,418,762	38,818,072	100,181,154	(58,067)	2.58x	39.7%
FS Equity Partners V, L.P.	2003	25,000,000	21,466,945	42,223,402	1,412,090	2.03x	15.2%
FdG Capital Partners II LP	2004	35,000,000	37,714,408	44,952,749	770,175	1.21x	3.7%
Lincolnshire Equity Fund III, L.P.	2004	55,000,000	55,514,957	85,554,884	20,430,338	1.91x	27.6%
Markstone Capital Partners, LP	2004	40,000,000	46,899,103	19,822,611	272,215	0.43x	-29.0%
New York/Fairview Emerging Managers Fund, L.P.-Tranche 1	2004	32,000,000	32,862,069	35,029,553	480,451	1.08x	1.3%
Yucaipa American Alliance Fund I, LP	2004	90,000,000	114,094,892	137,148,067	227,580	1.20x	3.9%
JP Morgan Fleming (Tranche A)	2005	43,000,000	43,197,105	48,786,593	4,956,242	1.24x	3.9%
Palladium Equity Partners III, L.P.	2005	35,000,000	36,324,729	70,590,351	50,968	1.94x	16.1%
Snow Phipps Group, L.P.	2005	20,000,000	24,505,430	22,347,815	9,124,090	1.28x	4.6%
USPF II Institutional Fund, L.P.	2005	65,000,000	85,734,194	102,850,928	797,520	1.21x	3.3%
Aisling Capital II, LP	2006	6,680,102	7,854,064	7,775,060	311,214	1.03x	0.5%
Ampersand 2006	2006	25,000,000	25,000,000	78,074,782	183,120	3.13x	16.9%
Apollo Investment Fund VI, L.P.	2006	90,000,000	115,838,240	173,338,314	1,620,482	1.51x	8.6%
BDCM Opportunity Fund II, L.P.	2006	25,000,000	37,203,442	102,225,390	2,180,500	2.81x	18.3%
Blackstone Capital Partners V, L.P.	2006	121,624,827	129,565,095	212,264,044	1,085,229	1.65x	8.0%
Catterton Partners VI, L.P.	2006	45,000,000	51,243,868	88,601,068	10,841,451	1.94x	11.4%
First Reserve Fund XI, L.P.	2006	45,000,000	47,820,682	30,880,319	42,470	0.65x	-9.8%
GF Capital Private Equity Fund, L.P.	2006	20,000,000	20,729,120	27,032,655	11,822,014	1.87x	11.5%
MidOcean Partners III, L.P.	2006	58,234,777	69,977,561	156,029,637	111,288	2.23x	13.6%
RRE Ventures IV, L.P.	2006	35,000,000	44,643,148	63,516,911	12,514,598	1.70x	6.3%
The Fourth Civen Fund	2006	69,502,898	72,910,892	105,361,467	43,198	1.45x	7.4%
Carlyle Partners V, L.P.	2007	70,000,000	72,385,953	129,350,257	3,451,913	1.83x	13.7%
Co-Investment Partners Europe, L.P.	2007	39,961,577	42,601,283	53,410,420	473,197	1.26x	4.5%

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
FTVentures III, LP	2007	24,201,990	27,042,781	52,454,701	6,002,182	2.16x	15.4%
GSO Capital Opportunities Fund LP	2007	45,000,000	67,377,298	95,627,284	902,557	1.43x	17.3%
Halyard Capital Fund II, L.P.	2007	25,000,000	21,834,806	26,860,530	6,797,073	1.54x	7.0%
Montreux Equity Partners IV, L.P.	2007	20,000,000	20,000,000	11,044,696	14,937,283	1.30x	3.1%
Nautic Partners VI, L.P.	2007	30,000,000	33,371,297	79,425,487	2,508,870	2.46x	18.6%
New Mountain Partners III, L.P.	2007	100,000,000	105,895,297	251,795,557	4,198,426	2.42x	14.6%
PCG Clean Energy & Technology Fund (East), LLC	2007	90,000,000	81,429,594	25,147,244	9,122,697	0.42x	-9.7%
Pegasus Partners IV, L.P.	2007	30,000,000	36,610,033	27,833,056	3,878,938	0.87x	-2.6%
Pine Brook Capital Partners, L.P.	2007	30,000,000	34,099,838	44,696,771	2,122,723	1.37x	7.8%
Quaker BioVentures II, L.P.	2007	20,000,000	19,358,740	21,298,246	231,607	1.11x	2.2%
RLJ Equity Partners Fund I, L.P.	2007	20,000,000	22,207,371	25,717,006	2,171,310	1.26x	5.2%
SCP Vitalife Partners II Fund	2007	20,000,000	20,099,698	1,579	3,694,568	0.18x	-13.4%
StarVest Partners II, L.P.	2007	25,000,000	25,159,680	12,838,046	6,510,810	0.77x	-3.2%
Trilantic Capital Partners IV L.P.	2007	69,028,637	70,369,187	107,068,779	3,836,668	1.58x	13.2%
United States Power Fund III, L.P.	2007	65,000,000	76,903,642	98,623,277	1,937,796	1.31x	4.4%
Vista Equity Partners Fund III, L.P.	2007	30,000,000	32,289,780	76,639,447	3,498,361	2.48x	26.8%
Aisling Capital III, LP	2008	14,000,000	15,795,192	37,253,299	86,843	2.36x	26.0%
Apollo Investment Fund VII, L.P.	2008	100,000,000	122,641,575	212,950,729	1,130,104	1.75x	22.6%
Ares Corporate Opportunities Fund III, L.P.	2008	75,000,000	91,895,841	194,522,102	748,357	2.12x	20.2%
Avista Capital Partners II, L.P.	2008	75,000,000	98,854,483	158,932,589	3,360,823	1.64x	14.4%
Blue Wolf Capital Fund II, L.P.	2008	25,000,000	27,497,673	46,459,204	143,634	1.69x	10.7%
Bridgepoint Europe IV	2008	26,647,304	27,310,693	37,228,532	4,599,957	1.53x	9.5%
Crestview Partners II, L.P.	2008	50,000,000	61,003,893	95,855,897	21,822,268	1.93x	13.9%
First Reserve Fund XII, L.P.	2008	45,000,000	49,986,866	26,002,530	54,888	0.52x	-17.9%
GCM Grosvenor NYCERS Emerging Manager Fund, L.P.	2008	116,737,374	148,678,953	179,943,518	49,114,703	1.54x	9.9%
GI Partners Fund III L.P.	2008	45,000,000	48,627,007	76,237,582	21,186	1.57x	13.0%
Landmark Equity Partners XIV, L.P.	2008	109,120,000	106,576,780	135,145,577	7,686,493	1.34x	9.4%
Leeds Equity Partners V, L.P.	2008	60,000,000	55,563,349	138,084,684	6,111,877	2.60x	18.5%
Levine Leichtman Capital Partners IV, L.P.	2008	35,000,000	37,477,097	59,355,428	3,315,085	1.67x	17.8%
New York/Fairview Emerging Managers Fund, L.P.-Tranche 2	2008	45,000,000	45,593,762	98,544,993	21,688,967	2.64x	17.5%
NGN BioMed Opportunity II, L.P.	2008	20,000,000	19,151,821	15,346,209	9,591,800	1.30x	3.2%
Onex Partners III LP	2008	75,000,000	82,261,325	123,329,468	12,794,794	1.65x	11.4%
Paladin III (NY City), L.P.	2008	30,000,000	42,398,853	85,435,293	11,510,460	2.29x	13.2%
Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	2008	45,000,000	51,842,597	56,048,355	18,343	1.08x	2.1%

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Yucaipa American Alliance Fund II, LP	2008	120,000,000	164,699,094	179,267,760	97,909,067	1.68x	8.0%
Yucaipa Corporate Initiatives Fund II, LP	2008	42,092,788	41,334,383	36,643,956	594,792	0.90x	-1.4%
FS Equity Partners VI, L.P.	2009	32,500,000	32,795,595	92,678,267	14,407,303	3.27x	23.7%
Lexington Capital Partners VII, L.P.	2009	50,000,000	44,798,718	68,011,360	6,048,574	1.65x	13.8%
Lincolnshire Equity Fund IV, L.P.	2009	27,500,000	29,739,521	35,548,777	7,128,129	1.44x	8.0%
Welsh, Carson, Anderson & Stowe XI, L.P.	2009	40,000,000	39,725,634	64,273,518	2,770,516	1.69x	11.7%
JP Morgan Fleming (Tranche B)	2010	35,000,000	37,098,692	50,436,431	16,696,182	1.81x	10.2%
Snow Phipps II, L.P.	2010	30,000,000	36,535,241	32,618,121	16,481,780	1.34x	7.1%
Trident V, L.P.	2010	110,000,000	130,161,068	182,554,873	66,471,819	1.91x	12.0%
American Securities Partners VI, L.P.	2011	80,000,000	89,723,167	156,946,161	47,572,197	2.28x	21.9%
Ampersand 2011	2011	25,000,000	25,000,000	80,968,121	197,202	3.25x	21.8%
AXA Secondary Fund V B L.P.	2011	120,000,000	98,870,221	158,462,629	330,858	1.61x	15.4%
BC European Capital IX	2011	128,915,739	150,050,514	181,757,621	55,992,270	1.58x	10.6%
BDCM Opportunity Fund III, L.P.	2011	45,000,000	67,166,680	61,547,581	71,065,492	1.97x	11.5%
Blackstone Capital Partners VI, L.P.	2011	120,000,000	128,973,407	182,426,371	48,941,556	1.79x	12.4%
EQT VI, L.P.	2011	106,649,521	113,483,799	198,017,818	125,741	1.75x	13.6%
Pegasus Partners V, L.P.	2011	20,789,916	26,784,961	22,725,995	11,953,788	1.29x	5.7%
Platinum Equity Capital Partners III, L.P.	2011	100,000,000	85,742,346	172,090,805	18,613,623	2.22x	35.8%
Vista Equity Partners Fund IV, L.P.	2011	100,000,000	105,896,862	133,593,497	76,514,683	1.98x	14.8%
Wellspring Capital Partners V, L.P.	2011	40,000,000	42,518,070	60,587,611	12,823,528	1.73x	15.4%
Ares Corporate Opportunities Fund IV, L.P.	2012	125,000,000	133,438,399	207,683,200	43,766,586	1.88x	14.7%
Green Equity Investors VI, L.P.	2012	120,000,000	134,456,598	141,617,120	128,211,151	2.01x	14.1%
<u>NYCERS - 2012 Emerging Manager Program</u>	<u>2012</u>	<u>128,600,000</u>	<u>135,092,726</u>	<u>237,489,076</u>	<u>76,928,069</u>	<u>2.33x</u>	<u>20.2%</u>
Palladium Equity Partners IV, L.P.	2012	55,000,000	56,388,180	39,692,985	51,927,955	1.62x	10.4%
Trilantic Capital Partners V L.P.	2012	70,000,000	76,577,965	105,015,887	23,624,375	1.68x	15.6%
Warburg Pincus Private Equity XI, L.P.	2012	110,000,000	116,079,667	151,762,922	46,941,868	1.71x	12.1%
Apollo Investment Fund VIII, L.P.	2013	140,000,000	136,742,956	151,350,814	52,082,937	1.49x	10.0%
ASF VI B L.P.	2013	83,000,000	68,580,939	88,632,902	12,073,264	1.47x	12.2%
Carlyle Partners VI, L.P.	2013	75,000,000	81,580,353	120,584,525	34,921,211	1.91x	15.1%
Crestview Partners III, L.P.	2013	66,000,000	61,534,730	37,131,373	56,574,044	1.52x	11.9%
Landmark - NYC Fund I, L.P.	2013	25,000,000	22,906,426	27,324,075	13,171,632	1.77x	15.6%
Landmark Equity Partners XV, L.P.	2013	75,000,000	60,205,101	69,719,830	15,912,270	1.42x	11.9%
ASF VI B NYC Co-Invest L.P.	2014	27,000,000	23,193,845	28,582,470	6,402,957	1.51x	12.4%
Bridgepoint Europe V L.P.	2014	61,649,451	59,321,085	81,111,250	34,862,815	1.96x	18.5%

Information provided by the New York City Employees' Retirement System Consultants



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Carlyle Partners VI, L.P. (Side Car)	2014	6,433,000	4,193,607	7,620,214	4,360,665	1.99x	12.3%
Crestview Partners III (Co-Investment B), L.P.	2014	22,000,000	22,781,960	1,085,940	26,949,384	1.23x	3.8%
CVC Capital Partners VI, L.P.	2014	123,783,391	134,641,080	148,043,129	124,491,264	2.02x	17.1%
Lexington Capital Partners VIII, L.P.	2014	110,000,000	100,053,347	99,325,644	67,593,214	1.67x	16.7%
Olympus Growth Fund VI, L.P.	2014	75,000,000	76,148,005	81,055,802	62,219,183	1.88x	16.7%
Vista Equity Partners Fund V, L.P.	2014	125,000,000	156,535,815	183,219,234	166,145,896	2.23x	19.5%
ASF VII B L.P.	2015	94,500,000	63,436,379	48,558,770	55,432,078	1.64x	16.8%
ASF VII B NYC Co-Invest L.P.	2015	46,000,000	32,254,963	30,777,451	26,236,604	1.77x	18.9%
Bridgepoint Europe V Co-Invest	2015	18,277,124	16,788,035	34,908,186	10,319,701	2.69x	27.1%
Centerbridge Capital Partners III, L.P.	2015	23,700,000	31,240,076	29,642,076	23,073,849	1.69x	18.6%
EQT VII, L.P.	2015	163,012,338	175,221,617	257,047,636	91,885,675	1.99x	22.5%
<u>NYCERS - 2015 Emerging Manager Program</u>	<u>2015</u>	<u>158,750,000</u>	<u>155,638,292</u>	<u>62,358,313</u>	<u>221,346,878</u>	<u>1.82x</u>	<u>22.1%</u>
Siris Partners III, L.P.	2015	31,000,000	32,981,149	24,999,371	23,944,126	1.48x	11.8%
Warburg Pincus Private Equity XII, L.P.	2015	205,500,000	205,861,417	217,866,288	198,582,509	2.02x	18.1%
Welsh, Carson, Anderson & Stowe XII, L.P.	2015	78,500,000	75,234,053	110,330,753	73,835,313	2.45x	27.0%
American Securities Partners VII, L.P.	2016	80,000,000	78,370,470	41,244,236	109,071,133	1.92x	16.1%
Apax IX USD, L.P.	2016	127,000,000	136,992,171	153,113,447	123,609,245	2.02x	23.2%
BCEC X Co-Investment	2016	35,738,985	35,955,034	11,728,643	55,142,227	1.86x	15.7%
Platinum Equity Capital Partners IV, L.P.	2016	111,000,000	109,371,068	102,772,053	126,635,609	2.10x	25.0%
Vista Equity Partners Fund VI, L.P.	2016	158,000,000	197,141,297	165,699,170	239,735,340	2.06x	19.6%
Ares Corporate Opportunities Fund V, L.P.	2017	95,000,000	102,874,763	47,157,001	91,875,871	1.35x	9.6%
BC European Capital X	2017	88,810,613	84,248,362	15,089,631	109,096,082	1.47x	10.6%
CVC Capital Partners VII, L.P.	2017	153,172,831	149,749,470	39,030,587	220,403,648	1.73x	23.3%
Green Equity Investors VII, L.P.	2017	95,000,000	90,827,780	75,011,809	117,882,200	2.12x	22.6%
KKR Americas Fund XII, L.P.	2017	158,000,000	152,383,176	67,627,703	195,685,915	1.73x	20.4%
Palladium Equity Partners V, L.P.	2017	33,333,333	21,246,869	5,797,008	22,136,052	1.31x	10.3%
Warburg Pincus Financial Sector, L.P.	2017	104,000,000	104,662,019	40,072,523	149,485,981	1.81x	21.6%
Apollo Investment Fund IX, L.P.	2018	256,000,000	221,767,170	79,022,677	246,109,613	1.47x	25.0%
ASF VIII B L.P.	2018	174,000,000	91,840,081	22,413,813	115,458,658	1.50x	25.3%
Bridgepoint Europe VI	2018	119,715,570	100,240,974	10,401,977	144,755,201	1.55x	23.0%
EQT VIII Co-Investment	2018	39,513,017	37,570,673	29,644,611	48,645,225	2.08x	37.5%
EQT VIII, L.P.	2018	110,615,812	108,809,584	76,227,227	119,384,341	1.80x	26.9%
Platinum Equity Capital Partners IV Co-Investment, L.P.	2018	16,000,000	11,221,788	2,232,710	13,873,565	1.44x	9.2%
Platinum Equity Small Cap Fund, L.P.	2018	41,000,000	29,703,062	6,703,129	50,783,626	1.94x	30.4%

Information provided by the New York City Employees' Retirement System Consultants



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Siris Partners IV, L.P.	2018	89,000,000	73,900,542	10,591,551	105,217,727	1.57x	18.8%
Vista Equity Partners Fund VII, L.P.	2018	177,500,000	159,502,435	16,938,741	185,962,575	1.27x	10.7%
Apax X USD L.P.	2019	104,500,000	84,100,633	6,573,550	97,393,794	1.24x	19.8%
ASF VIII B NYC Co-Invest L.P.	2019	87,000,000	36,782,599	7,604,238	50,705,312	1.59x	39.3%
Blackstone Capital Partners VIII L.P.	2019	109,000,000	61,878,851	3,627,902	68,085,456	1.16x	12.5%
Bridgepoint Europe VI Co-Invest	2019	30,183,911	23,006,044	-	36,944,028	1.61x	19.9%
Crestview Partners IV (Co-Investment), L.P.	2019	23,666,667	13,364,217	4,431,920	18,317,849	1.70x	57.0%
Crestview Partners IV, L.P.	2019	71,000,000	40,092,644	11,509,869	48,554,202	1.50x	41.4%
KKR European Fund V (USD)	2019	83,250,000	71,986,402	13,901,011	71,478,855	1.19x	9.5%
Lexington Capital Partners IX	2019	106,500,000	84,955,734	22,956,932	102,770,222	1.48x	30.9%
Lexington IX Co-Invest	2019	35,500,000	17,396,775	7,118,591	22,321,153	1.69x	37.9%
Lindsay Goldberg V	2019	87,000,000	43,350,480	11,868,636	47,791,140	1.38x	26.4%
<u>NYCERS - 2019 Emerging Manager Program</u>	<u>2019</u>	<u>247,650,000</u>	<u>70,290,941</u>	<u>6,968,416</u>	<u>110,346,175</u>	<u>1.67x</u>	<u>26.7%</u>
Platinum Equity Capital Partners V, L.P.	2019	157,000,000	160,340,959	25,019,785	212,190,748	1.48x	25.4%
Trilantic Capital Partners VI (North America) L.P.	2019	51,000,000	43,792,614	4,577,339	59,005,538	1.45x	21.7%
Warburg Pincus Global Growth, L.P.	2019	125,500,000	109,863,978	909,875	151,306,599	1.39x	15.1%
Welsh, Carson, Anderson & Stowe XIII, L.P.	2019	89,000,000	73,781,393	29,581,527	75,296,981	1.42x	26.1%
BC Partners Fund XI	2020	110,000,000	47,597,945	269,657	50,557,809	1.07x	NM
Clearlake Capital Partners VI, L.P.	2020	47,000,000	47,558,076	3,936,896	70,690,208	1.57x	28.9%
EQT IX (No. 2) USD SCSP	2020	92,125,000	90,431,412	8,940,931	98,663,382	1.19x	14.0%
EQT IX Co-Investment	2020	25,125,000	24,945,834	418,937	25,701,341	1.05x	NM
FTV VI	2020	21,500,000	21,107,141	2,469,461	33,592,131	1.71x	31.0%
Green Equity Investors VIII Coinvest N, L.P.	2020	36,300,000	25,994,288	-	30,987,067	1.19x	9.6%
Green Equity Investors VIII, L.P.	2020	109,000,000	94,993,136	883,114	107,666,004	1.14x	8.8%
Hg Genesis 9, L.P.	2020	50,049,361	40,644,636	8,430,447	38,918,070	1.16x	16.7%
KKR Asian Fund IV SCSP	2020	103,000,000	37,259,077	285,312	36,944,646	1.00x	NM
NYC-NorthBound Emerging Managers Program LP	2020	262,000,000	88,147,121	1,502,544	122,397,106	1.41x	NM
Valor Equity Partners V, L.P.	2020	26,000,000	21,750,276	62,582	29,798,723	1.37x	20.4%
Apax Digital Fund II, L.P.	2021	45,000,000	1,605,372	-	335,156	0.21x	NM
Ares Corporate Opportunities Fund VI Co-Invest	2021	60,000,000	40,731,784	-	42,278,810	1.04x	NM
Ares Corporate Opportunities Fund VI, L.P.	2021	100,000,000	87,924,467	19,407,688	78,906,207	1.12x	NM
BC Partners XI Metro Co-Investment L.P.	2021	50,000,000	32,456,507	-	37,538,200	1.16x	NM
Centerbridge Capital Partners IV Co-Invest	2021	32,000,000	24,318,705	1,453,696	34,196,043	1.47x	NM
Centerbridge Capital Partners IV, L.P.	2021	64,000,000	27,377,998	-	42,656,445	1.56x	NM

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Clearlake Capital Partners VII, L.P.	2021	144,000,000	73,977,761	3,505	76,644,538	1.04x	NM
CVC Capital Partners VIII, L.P.	2021	166,751,459	95,728,287	556,941	102,786,364	1.08x	NM
Grain Communications Opportunity Fund III, L.P.	2021	21,000,000	13,330,770	50,777	12,247,651	0.92x	NM
Harbourvest Centre Street Co-Investment Fund L.P.	2021	172,000,000	92,220,673	-	91,678,726	0.99x	NM
Insight Partners XII	2021	96,000,000	66,676,775	106,087	57,390,095	0.86x	NM
Insight Partners XII Buyout Annex Fund, L.P.	2021	32,000,000	20,320,000	-	18,534,812	0.91x	NM
KKR North America Fund XIII, L.P.	2021	160,000,000	53,622,162	-	49,431,295	0.92x	NM
One Rock Capital Partners III, L.P.	2021	43,000,000	31,972,622	4,401,917	36,630,764	1.28x	NM
Platinum Equity Capital Partners V Co-Investment, L.P.	2021	39,250,000	38,725,935	5,948,477	72,334,431	2.02x	NM
Reverence Capital Partners V (PE Fund III), L.P.	2021	42,000,000	9,422,798	68,352	8,567,945	0.92x	NM
Reverence III Side Car	2021	15,000,000	3,069,571	24,412	3,069,249	1.01x	NM
Stellax Capital Partners II	2021	51,500,000	31,833,756	1,935,916	32,385,807	1.08x	NM
The Resolute Fund V, L.P.	2021	72,000,000	60,076,958	624,252	89,623,376	1.50x	NM
Vistria Fund IV, L.P.	2021	48,000,000	35,441,882	676,551	36,418,026	1.05x	NM
Warburg Pincus Financial Sector II, L.P.	2021	84,500,000	32,668,510	-	42,120,630	1.29x	NM
Apax XI	2022	131,000,000	-	-	(1,167,175)	-	NM
EQT X	2022	111,000,000	1,856,288	1,856,288	(978,471)	0.47x	NM
EQT X Co-Invest	2022	37,000,000	6,735,990	-	6,701,225	0.99x	NM
FTV VII	2022	59,579,960	22,640,385	-	22,335,368	0.99x	NM
FTV VII Co-Invest	2022	13,405,490	3,924,570	-	3,919,392	1.00x	NM
Green Equity Investors IX Co-Invest	2022	40,000,000	-	-	-	-	NM
Green Equity Investors IX, L.P.	2022	120,000,000	-	-	(213,979)	-	NM
Hg Genesis 10	2022	69,975,648	896,931	-	832,899	0.93x	NM
Hg NYC Co-Invest	2022	24,600,000	8,067,936	-	8,988,706	1.11x	NM
Hg Saturn 3	2022	49,200,000	494,696	-	1,095,442	2.21x	NM
KKR European Fund VI (USD)	2022	67,500,000	-	-	(1,044,211)	-	NM
Lexington Capital Partners X	2022	96,000,000	-	-	3,173,912	-	NM
Lexington Capital Partners X Co-Invest	2022	32,000,000	6,309,556	-	7,680,621	1.22x	NM
Nordic Capital XI	2022	89,113,484	-	-	(957,876)	-	NM
Nordic Capital XI Co-Invest	2022	39,209,933	-	-	-	-	NM
Permira VIII	2022	139,341,526	21,275,411	-	20,428,629	0.96x	NM
Platinum Equity Capital Partners VI Co-Invest	2022	52,000,000	-	-	-	-	NM
Platinum Equity Capital Partners VI, L.P.	2022	156,000,000	10,393,978	-	8,198,983	0.79x	NM
Raine Partners IV	2022	32,000,000	-	-	(919,912)	-	NM

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Thoma Bravo XV	2022	123,000,000	66,013,633	26,652	65,634,982	0.99x	NM
Thoma Bravo XV Co-Invest	2022	41,000,000	21,464,289	-	20,966,585	0.98x	NM
TPG Rise Climate Co-Invest, L.P.	2022	91,666,667	23,009,262	-	32,714,297	1.42x	NM
TPG Rise Climate, L.P.	2022	45,833,333	12,379,134	235,530	14,393,325	1.18x	NM
Warburg Pincus Global Growth XIV Co-Invest	2022	56,420,000	5,704,932	-	5,591,342	0.98x	NM
Warburg Pincus Global Growth XIV, L.P.	2022	94,040,000	18,967,739	-	18,422,803	0.97x	NM
Welsh, Carson, Anderson & Stowe XIV, L.P.	2022	96,000,000	8,682,807	-	5,690,739	0.66x	NM
Welsh, Carson, Anderson & Stowe XIV, L.P. Side Car	2022	32,000,000	-	-	-	-	NM
Apollo Fund X NYC Sidecar Co-Invest, L.P.	2023	41,000,000	-	-	-	-	NM
Apollo Investment Fund X, L.P.	2023	123,000,000	-	-	(1,946,926)	-	NM
Bridgepoint Europe VII	2023	59,754,745	-	-	(1,024,357)	-	NM
Bridgepoint Europe VII Co-Invest	2023	29,885,620	-	-	-	-	NM
Valor Equity Partners VI, L.P.	2023	52,000,000	9,027,786	-	7,812,299	0.87x	NM
Vista Co-Invest Fund 2022-4, L.P.	2023	41,000,000	8,477,137	-	8,477,514	1.00x	NM
Vista Equity Partners Fund VIII, L.P.	2023	123,000,000	16,580,713	-	14,607,088	0.88x	NM

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL PRIVATE REAL ESTATE			8,910,393,320	7,333,174,275	5,087,157,442	5,745,432,751	1.48	8.4%
TOTAL PRIVATE REAL ESTATE								
JP Morgan Strategic Property Fund	2006	Core Portfolio	136,000,000	198,941,665	325,553,591	54,980,008	1.91	6.5%
PRISA	2006	Core Portfolio	86,000,000	92,673,389	51,686,845	142,620,845	2.10	5.3%
Prologis Targeted US Logistics Fund	2006	Core Portfolio	40,000,000	50,472,763	19,439,903	101,731,150	2.40	8.6%
RREEF America REIT II	2006	Core Portfolio	162,000,000	189,537,802	78,842,131	234,113,661	1.65	5.9%
UBS Trumbull Property Fund	2006	Core Portfolio	156,000,000	253,100,833	313,137,923	82,183,456	1.56	5.6%
Heitman America Real Estate Trust, L.P.	2007	Core Portfolio	115,000,000	207,762,637	285,015,743	133,858,384	2.02	7.8%
JP Morgan Special Situation Property Fund	2007	Core Portfolio	90,000,000	131,560,654	77,635,763	142,740,858	1.68	4.8%
PRISA II	2007	Core Portfolio	141,518,761	150,922,667	75,800,978	251,997,624	2.17	6.2%
LaSalle Property Fund	2010	Core Portfolio	132,000,000	131,620,297	39,429,851	181,003,639	1.67	9.2%
NYC Asset Investor #2	2013	Core Portfolio	75,000,000	78,684,180	32,373,418	46,398,315	1.00	0.0%
MetLife Core Property Fund	2014	Core Portfolio	50,000,000	50,000,000	20,234,043	77,565,733	1.96	9.6%
Almanac Realty Securities VII	2015	Core Portfolio	65,000,000	65,330,014	52,528,169	38,570,770	1.39	11.6%
Almanac Realty Securities VII (Sidecar IV)	2015	Core Portfolio	20,000,000	16,497,461	11,976,607	11,592,840	1.43	12.4%
USAA Eagle Real Estate Fund	2015	Core Portfolio	90,000,000	99,317,673	30,459,832	108,824,623	1.40	6.8%
Artemis Co-Investment1	2016	Core Portfolio	53,000,000	61,973,289	81,231,476	17,096,326	1.59	16.6%
Brookfield Premier Real Estate Partners	2016	Core Portfolio	169,000,000	207,835,531	38,835,531	267,835,595	1.48	10.8%
Exeter Core Industrial Club Fund II	2016	Core Portfolio	28,000,000	27,270,526	11,951,320	52,711,794	2.37	20.9%
Jamestown Premier Property Fund	2016	Core Portfolio	48,721,196	57,449,882	23,258,267	25,235,647	0.84	-4.5%
Carlyle Property Investors	2017	Core Portfolio	91,000,000	117,147,197	26,147,197	170,759,485	1.68	12.2%
Lion Industrial Trust	2017	Core Portfolio	90,000,000	127,427,245	29,718,520	258,590,158	2.26	19.9%
Almanac Realty Securities VIII	2018	Core Portfolio	51,000,000	31,007,697	7,105,447	30,579,939	1.22	12.1%
Almanac Realty Securities VIII (Sidecar II)	2018	Core Portfolio	34,000,000	21,050,991	5,324,106	22,965,838	1.34	18.4%
Heitman Core Real Estate Debt Income Trust2	2018	Core Portfolio	127,000,000	148,891,052	21,891,052	138,715,667	1.08	3.5%
Artemis Income and Growth Fund	2019	Core Portfolio	61,000,000	48,655,818	12,761,940	37,231,236	1.03	1.8%
Harrison Street Core Property Fund	2019	Core Portfolio	90,000,000	106,592,256	13,411,682	118,495,916	1.24	7.2%
Harrison Street Core Property Fund Co-Investment	2019	Core Portfolio	45,000,000	43,969,733	3,821,597	57,268,438	1.39	13.1%
Cortland Growth and Income, L.P.	2020	Core Portfolio	107,000,000	122,213,762	15,213,762	148,065,484	1.34	12.9%
Exeter Core Industrial Fund III	2020	Core Portfolio	72,100,000	70,852,987	7,776,824	75,894,001	1.18	9.7%
LaSalle Centre Street GPS Co-Investment Program - Core	2021	Core Portfolio	80,800,000	49,855,878	2,105,340	51,468,324	1.07	6.6%
RREEF Core Plus Industrial Fund	2021	Core Portfolio	112,500,000	115,744,284	3,244,284	133,670,074	1.18	13.8%
TPG Real Estate Thematic Advantage Core-Plus JV IV, L.P.	2021	Core Portfolio	135,000,000	63,617,114	54,287	63,477,000	1.00	NM
EQT Exeter Industrial Core-Plus Fund IV	2022	Core Portfolio	142,000,000	13,688,800	-	11,958,738	0.87	NM
Blackstone Real Estate Partners IV L.P.	2004	Non-Core Portfolio	30,000,000	38,394,789	54,819,206	264,856	1.43	10.3%
Apollo Real Estate Investment Fund V	2006	Non-Core Portfolio	25,000,000	25,000,000	29,086,035	25,150	1.16	1.9%
American Value Partners Fund I1	2007	Non-Core Portfolio	55,000,000	39,320,163	42,295,064	462,507	1.09	1.8%
Blackstone Real Estate Partners VI L.P.	2007	Non-Core Portfolio	110,000,000	123,504,215	245,204,844	1,694,713	2.00	13.2%
Carlyle Realty Partners V, L.P.	2007	Non-Core Portfolio	17,000,000	25,901,148	38,263,383	43,437	1.48	8.7%
Metropolitan Workforce Housing Fund1	2007	Non-Core Portfolio	14,000,000	14,013,027	16,744,531	428,188	1.23	4.0%
Westbrook Real Estate Fund VII, L.P.	2007	Non-Core Portfolio	40,000,000	44,109,330	45,267,881	4,449,362	1.13	2.0%

Information provided by the New York City Retirement Systems Consultants. Interim returns are subject to change and may differ due to differences in accounting and performance methodologies.



Through March 31, 2023

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Ares European Real Estate Fund III	2008	Non-Core Portfolio	30,000,000	30,487,501	33,642,499	110,934	1.11	2.6%
Blackstone Real Estate Partners Europe III - USD	2008	Non-Core Portfolio	50,000,000	53,275,612	72,678,247	3,836,977	1.44	10.0%
PRISA III	2008	Non-Core Portfolio	50,000,000	162,238,700	101,840,201	254,481,391	2.20	12.0%
Silverpeak Legacy Partners III	2008	Non-Core Portfolio	50,000,000	23,689,654	5,769,988	1,098,799	0.29	-12.0%
Stockbridge Real Estate III	2008	Non-Core Portfolio	27,000,000	26,998,145	16,829,753	16,251,522	1.23	2.3%
Thor Urban Property Fund II	2008	Non-Core Portfolio	40,000,000	54,796,108	57,039,293	567,416	1.05	1.7%
Walton Street Real Estate Fund VI	2009	Non-Core Portfolio	50,000,000	44,323,933	50,723,633	21,785,230	1.64	8.4%
Westbrook Real Estate Fund VIII, L.P.	2009	Non-Core Portfolio	50,000,000	59,855,411	68,952,803	6,663,790	1.26	9.4%
Carlyle Realty Partners VI, L.P.	2011	Non-Core Portfolio	70,000,000	76,545,625	108,897,052	6,055,036	1.50	19.8%
H2 Special Opportunities Fund II2	2011	Non-Core Portfolio	40,000,000	40,045,335	58,385,494	670,700	1.47	13.2%
Blackstone Real Estate Partners VII L.P.	2012	Non-Core Portfolio	170,000,000	218,415,225	337,082,883	32,110,920	1.69	15.4%
Brookfield Strategic Real Estate Partners	2012	Non-Core Portfolio	100,000,000	123,266,246	214,778,082	23,058,949	1.93	18.3%
Taconic New York City Investment Fund	2012	Non-Core Portfolio	70,000,000	29,272,728	47,996,467	5,204,533	1.82	15.5%
Blackstone Real Estate Partners Europe IV L.P. - USD	2013	Non-Core Portfolio	169,000,000	169,571,754	214,503,562	27,310,594	1.43	11.4%
Lone Star Real Estate Fund III, L.P.2	2013	Non-Core Portfolio	100,000,000	95,639,471	128,733,407	425,223	1.35	14.1%
NYC Asset Investor #1	2013	Non-Core Portfolio	50,000,000	64,627,588	37,263,145	31,054,765	1.06	1.1%
NYC Asset Investor #3	2013	Non-Core Portfolio	50,000,000	36,464,018	10,064,170	33,095,823	1.18	3.1%
Carlyle Realty Partners VII, L.P.	2014	Non-Core Portfolio	80,000,000	74,327,490	89,368,542	19,587,127	1.47	12.7%
DivcoWest Fund IV	2014	Non-Core Portfolio	23,000,000	22,770,380	37,672,371	1,301,645	1.71	25.1%
H2 Special Opportunities III2	2014	Non-Core Portfolio	65,000,000	67,503,668	67,443,994	17,160,135	1.25	7.3%
Blackstone Real Estate Partners VIII L.P.	2015	Non-Core Portfolio	151,000,000	172,451,757	178,331,736	115,257,384	1.70	16.4%
European Property Investors Special Opportunities 4 LP	2015	Non-Core Portfolio	49,445,103	44,997,602	18,578,338	43,377,223	1.38	7.9%
DivcoWest Fund V	2016	Non-Core Portfolio	60,000,000	47,852,210	17,513,441	41,699,851	1.24	5.8%
H2 Special Opportunities IV2	2016	Non-Core Portfolio	91,000,000	91,699,867	21,362,022	90,284,217	1.22	6.2%
PW Real Estate Fund III	2016	Non-Core Portfolio	49,620,552	38,506,722	94,618,366	18,264,131	2.93	30.7%
Westbrook Real Estate Fund X	2016	Non-Core Portfolio	36,000,000	34,992,799	30,688,402	12,315,162	1.23	9.3%
Basis Investment Group Real Estate Fund I1,2	2017	Non-Core Portfolio	17,000,000	17,860,347	11,905,843	11,620,356	1.32	11.5%
DRA Growth and Income Fund IX	2017	Non-Core Portfolio	49,000,000	53,925,775	50,983,567	36,545,111	1.62	18.0%
Exeter Industrial Value Fund IV, L.P.	2017	Non-Core Portfolio	30,000,000	28,201,677	57,725,041	4,386,002	2.20	30.7%
NYCRS-KKR CMBS Retention Partners2	2017	Non-Core Portfolio	122,000,000	110,706,642	47,942,520	98,892,412	1.33	7.3%
Pramerica Real Estate Capital VI2	2017	Non-Core Portfolio	60,643,960	62,902,427	50,883,683	21,828,185	1.16	7.5%
KKR Real Estate Partners Americas II	2018	Non-Core Portfolio	118,700,000	121,457,882	151,689,137	37,345,040	1.56	24.9%
Aermont Capital Real Estate Fund IV	2019	Non-Core Portfolio	73,271,769	52,159,480	-	43,130,906	0.83	-9.7%
Blackstone Real Estate Partners Europe VI L.P.	2019	Non-Core Portfolio	99,000,000	62,520,158	28,585,212	51,147,389	1.28	17.7%
Blackstone Real Estate Partners IX L.P.	2019	Non-Core Portfolio	166,000,000	170,518,654	54,933,874	194,591,161	1.46	27.1%
Brookfield Strategic Real Estate Partners III, L.P.	2019	Non-Core Portfolio	170,000,000	153,270,158	47,279,302	155,569,486	1.32	13.6%
Grosvenor Real Estate Emerging Manager SMA1	2019	Non-Core Portfolio	236,000,000	157,049,693	22,192,262	147,193,815	1.08	6.8%
Westbrook Real Estate Fund XI	2019	Non-Core Portfolio	83,000,000	43,739,732	21,782,149	30,288,734	1.19	21.5%
DivcoWest Fund VI	2020	Non-Core Portfolio	82,000,000	41,531,736	1,338,852	39,178,891	0.98	-2.1%
DRA Growth and Income Fund X	2020	Non-Core Portfolio	59,000,000	53,617,429	16,176,699	53,278,209	1.30	26.3%
ElmTree U.S. Net Lease Fund IV, L.P.	2020	Non-Core Portfolio	68,000,000	45,735,970	30,969,368	32,197,678	1.38	28.9%
Exeter Industrial Value Fund V, L.P.	2020	Non-Core Portfolio	49,000,000	48,247,129	-	72,292,013	1.50	31.7%

Information provided by the New York City Retirement Systems Consultants. Interim returns are subject to change and may differ due to differences in accounting and performance methodologies.

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
GreenOak Asia III	2020	Non-Core Portfolio	87,000,000	90,491,088	49,906,910	46,630,457	1.07	8.9%
KKR RE Europe II	2020	Non-Core Portfolio	83,250,000	60,532,148	18,795,074	42,677,149	1.02	1.4%
KKR Real Estate Securities Dislocation Opportunity Co-Investment Stra	2020	Non-Core Portfolio	98,000,000	58,708,223	66,048,508	8,437,406	1.27	35.4%
Pramerica Real Estate Capital VII2	2020	Non-Core Portfolio	88,000,000	23,727,536	2,018,707	25,342,725	1.15	14.5%
Aermont Capital Real Estate Fund V	2021	Non-Core Portfolio	113,021,980	-	-	(1,428,986)		NM
Almanac Realty Securities IX Sidecar II	2021	Non-Core Portfolio	45,000,000	3,106,678	-	3,330,976	1.07	NM
Almanac Realty Securities IX, L.P.	2021	Non-Core Portfolio	90,000,000	11,764,528	4,574	10,836,122	0.92	NM
Basis Investment Group Real Estate Fund II2	2021	Non-Core Portfolio	48,000,000	22,514,856	6,722,963	16,794,630	1.04	5.6%
Brookfield Strategic Real Estate Partners IV	2021	Non-Core Portfolio	174,000,000	63,396,102	3,095,772	66,750,053	1.10	NM
Cerberus Institutional Real Estate Partners V SMA	2021	Non-Core Portfolio	89,000,000	58,423,155	3	70,528,655	1.21	19.2%
KKR Real Estate Partners Americas III SCSp	2021	Non-Core Portfolio	135,000,000	81,303,513	6,026,850	68,307,754	0.91	-8.6%
LaSalle Centre Street GPS Co-investment Program - Non-Core	2021	Non-Core Portfolio	121,200,000	45,451,214	1,490,782	45,712,886	1.04	3.6%
LBA Logistics Value Fund IX	2021	Non-Core Portfolio	81,000,000	21,807,692	-	19,680,345	0.90	NM
Mesirow Financial Real Estate Value Fund IV	2021	Non-Core Portfolio	34,500,000	14,662,949	506,000	16,037,622	1.13	13.0%
NYC Hudson Multifamily Green Fund	2021	Non-Core Portfolio	113,100,000	50,107,800	13,413,660	36,820,056	1.00	0.3%
Rialto Real Estate Fund IV - Debt, LP2	2021	Non-Core Portfolio	102,000,000	82,371,362	9,292,213	77,444,076	1.05	5.1%
Artemis Real Estate Partners Healthcare Fund II	2022	Non-Core Portfolio	98,000,000	18,826,764	5,041,651	12,123,160	0.91	NM
Blackstone Real Estate Partners X, LP	2022	Non-Core Portfolio	175,000,000	655,366	-	209,006	0.32	NM
Cerberus Institutional Real Estate Partners VI SMA	2022	Non-Core Portfolio	140,000,000	25,862,069	3	22,712,825	0.88	NM
Crow Holdings Realty Partners X	2022	Non-Core Portfolio	135,000,000	-	-	(459,223)		NM
EQT Exeter Industrial Value Fund VI, LP	2022	Non-Core Portfolio	135,000,000	-	-	-		NM
TPG Real Estate Partners IV, L.P.	2022	Non-Core Portfolio	150,000,000	9,492,046	-	6,860,412	0.72	NM
Waterton Residential Property Venture XV	2023	Non-Core Portfolio	135,000,000	-	-	-		NM

Information provided by the New York City Retirement Systems Consultants. Interim returns are subject to change and may differ due to differences in accounting and performance methodologies.

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL INFRASTRUCTURE		3,620,454,196	1,929,328,913	687,115,861	1,863,792,563	1.3x	12.2%
TOTAL INFRASTRUCTURE INVESTMENTS							
Brookfield Infrastructure Fund II, L.P.	2013	75,000,000	67,369,337	70,218,660	64,232,361	2.0x	12.9%
Global Energy & Power Infrastructure Fund II	2014	45,000,000	49,083,529	48,680,677	15,059,158	1.3x	13.8%
IFM Global Infrastructure Fund	2014	75,000,000	100,136,579	45,514,670	149,787,858	2.0x	11.7%
KKR Global Infrastructure Investors II L.P.	2014	77,000,000	82,920,354	119,017,418	37,043,489	1.9x	18.4%
Actis Energy 4	2016	64,300,000	64,389,504	79,942,705	12,221,000	1.4x	14.0%
ASF VII Infrastructure L.P.	2016	66,000,000	51,245,499	19,916,196	54,979,880	1.5x	15.7%
Brookfield Infrastructure Fund III, L.P.	2016	91,000,000	71,124,762	24,866,276	75,564,481	1.4x	10.5%
Global Infrastructure Partners III-A/B, L.P.	2016	106,000,000	107,818,639	50,442,665	110,149,774	1.5x	10.5%
Axiom Infrastructure North America (2017)	2017	67,104,915	70,180,503	20,878,682	75,005,969	1.4x	8.6%
EQT Infrastructure III (No.2) SCSp	2017	56,302,055	64,384,613	88,213,936	31,197,579	1.9x	20.9%
NYCRS EIG Energy Partners, L.P.	2017	65,880,000	40,120,740	23,003,536	23,509,144	1.2x	7.6%
Cardinal NR Sidecar Holdings L.P.	2018	10,500,000	10,570,919	3,490,771	16,536,492	1.9x	17.5%
EQT Infrastructure IV (No.2) USD SCSp	2018	101,500,000	93,098,035	16,213,559	104,556,208	1.3x	11.6%
Global Infrastructure Partners IV-A/B, L.P.	2018	117,400,000	89,924,133	531,588	95,729,673	1.1x	5.9%
KKR Global Infrastructure Investors III L.P.	2018	87,500,000	76,930,413	19,881,582	71,285,352	1.2x	8.4%
Ardian Infrastructure Fund V B	2019	72,323,739	50,151,193	1,933,987	59,542,989	1.2x	15.5%
Brookfield Infrastructure Fund IV Co-Investment (Snow)	2019	10,000,000	10,051,289	1,435,734	14,416,963	1.6x	15.5%
Brookfield Infrastructure Fund IV, L.P.	2019	101,000,000	95,993,309	20,476,687	102,436,502	1.3x	13.4%
Global Energy & Power Infrastructure Fund III, L.P.	2019	87,500,000	74,866,314	13,765,595	76,909,448	1.2x	13.1%
Actis Energy 5	2020	113,000,000	15,307,260	-	6,905,000	0.5x	-73.5%
BIS NYC Infrastructure Emerging Manager Opportunities Fund, L.P.	2020	71,660,000	16,669,649	-	17,576,040	1.1x	5.6%
EQT Infrastructure IV Co-Investment (B) SCSp (Saber)	2020	8,400,000	8,484,000	509,835	10,401,518	1.2x	8.9%
EQT Infrastructure IV Co-Investment (F) SCSp (Connect)	2020	15,700,000	14,278,244	-	24,239,726	1.7x	28.2%
EQT Infrastructure IV Co-Investment (G) SCSp (Lightspeed)	2020	12,712,770	12,754,645	-	16,606,845	1.3x	10.2%
EQT Infrastructure V (No.2) USD SCSp	2020	135,000,000	96,067,985	9,870,450	94,199,327	1.1x	9.0%
ASF VIII Infrastructure B L.P.	2021	147,000,000	17,026,838	3,028,517	15,050,628	1.1x	6.8%
Axiom Infrastructure North America (2021)	2021	93,630,688	95,530,934	3,069,783	96,301,882	1.0x	8.6%
Basalt Infrastructure Partners III	2021	114,000,000	76,990,178	-	82,844,510	1.1x	6.4%
KKR Global Infrastructure Investors IV (USD) SCSp	2021	205,000,000	86,073,172	1,086,420	79,439,382	0.9x	-10.6%
Stonepeak Infrastructure Fund IV, L.P.	2021	171,000,000	75,402,781	483,443	81,951,935	1.1x	9.1%
Stonepeak Patagonia (Co-Invest) Holdings LP (Project Panther)	2021	27,495,000	24,807,788	-	28,767,863	1.2x	24.6%

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Stonepeak Tiger (Co-Invest) Holdings (I-B) LP	2021	23,500,000	19,882,322	-	20,066,360	1.0x	0.6%
Ardian Infra Fund V Co-Invest Eden	2022	23,471,943	23,471,943	-	26,196,942	NM	NM
Ardian Infra Fund V Co-Invest Lemon	2022	18,200,660	16,540,414	-	16,926,569	NM	NM
Basalt Infrastructure Partners IV A L.P.	2022	167,700,000	-	-	-	NM	NM
BIP III Ride Co-Investment L.P. (Project Ride)	2022	16,771,505	16,771,505	-	18,650,574	NM	NM
Blackrock Global Infrastructure Fund IV	2022	134,000,000	8,793,158	-	7,531,933	NM	NM
Brookfield Infrastructure Fund V, LP	2022	167,690,000	-	-	(1,165,421)	NM	NM
DIF Infrastructure VII SCSp	2022	109,761,730	-	-	(1,456,587)	NM	NM
InfraVia European Fund V SCSp	2022	127,979,191	34,116,435	642,489	32,593,217	NM	NM
NYCRS EIG Energy Partners Co-Investment, L.P.	2022	16,470,000	-	-	-	-	0.0%
EQT Infrastructure VI (No.2) USD SCSp	2023	162,000,000	-	-	-	NM	NM
Global Infrastructure Partners V-A/B, L.P.	2023	162,000,000	-	-	-	NM	NM

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail



Through June 30, 2023

	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
TOTAL OPPORTUNISTIC FIXED INCOME		4,225,663,981	4,471,589,223	2,429,285,535	3,542,329,256	0.68%	7.29%
Avenue Special Situations Fund V, L.P.	2007	75,784,973	76,951,175	100,600,875.00	-	-	10.89%
Avenue Europe Special Sit. Fund, L.P.	2008	29,999,696	27,839,090	53,703,162.08	-	-	13.21%
PIMCO DiSCO Fund, L.P.	2008	150,000,000	150,427,750	204,457,598.81	-	-	11.23%
Alliance Bernstein PPIP Fund, L.P.	2009	41,697,493	41,697,493	57,295,571.07	-	-	15.51%
AG GECC PPIP Fund, L.P.	2010	27,000,000	27,052,129	41,724,862.00	-	-	20.19%
Avenue Special Situations Fund VI (A), L.P.	2011	70,000,000	71,766,544	72,515,200.00	7,074,286.00	0.00%	2.17%
GoldenTree Managed Account	2011	140,000,000	140,878,192	-	253,966,521.97	0.50%	5.79%
Marathon Centre Street Partnership, L.P. - Asset Class	2011	218,750,000	419,781,250	238,218,750.00	339,761,081.52	0.60%	5.82%
AG Centre Street Partnership, L.P. - CC Asset Class	2012	180,000,000	217,878,984	47,626,130.00	245,524,266.00	2.41%	4.54%
Apollo Centre Street Partnership, L.P.	2012	340,416,667	735,318,661	466,460,450.00	432,814,437.10	1.06%	6.65%
FCO MA Centre Street L.P.	2012	140,000,000	280,801,311	297,472,849.12	91,739,837.43	0.00%	8.85%
OHA Centre Street Partnership, L.P.	2012	262,500,000	332,455,346	73,107,048.71	456,946,704.99	1.25%	8.10%
Contrarian Centre Street Partnership, L.P. - Asset Class	2013	90,000,000	90,000,000	-	105,112,938.61	0.04%	1.89%
Lone Star Fund VIII (U.S.), L.P.	2013	100,000,000	98,438,980	103,019,076.87	13,706,801.14	0.00%	7.89%
Oaktree Opportunities Fund IX, L.P.	2013	100,000,000	100,000,000	90,067,707.33	82,251,034.00	0.00%	7.90%
Ares Centre Street Partnership, L.P.	2014	140,000,000	140,000,000	-	264,410,670.40	0.00%	8.85%
Brightwood Capital Fund III, L.P.	2015	35,000,000	28,403,806	28,595,534.60	10,529,433.00	0.00%	6.63%
Torchlight Debt Opportunity Fund V, LP	2015	67,000,000	53,600,000	64,215,398.00	6,173,101.00	1.52%	10.33%
Brightwood Capital Fund IV, LP	2016	87,500,000	87,500,000	35,521,929.00	78,838,342.00	0.00%	7.42%
ICG Centre Street Partnership, L.P.	2017	120,000,000	197,378,139	137,067,483.18	97,306,128.06	0.00%	8.49%
KKR OFI SMA	2017	272,000,000	210,190,196	61,228,705.00	209,758,542.83	0.00%	7.52%
Maranon Centre Street Partnership, L.P. -	2018	103,000,000	97,848,888	2,585,703.72	131,571,864.75	2.05%	8.53%
FCO MA Centre Street II (ER) LP	2019	140,000,000	206,340,242	131,174,006.90	103,975,234.05	0.00%	11.73%
Torchlight Debt Fund VI, LP -	2019	84,000,000	103,387,980	63,452,491.00	61,694,475.00	0.83%	8.37%
FCO MA Centre Street II EXP (ER) LP	2020	70,000,000	34,762,745	7,386,903.82	30,636,741.05	0.00%	7.27%
GCM Grosvenor NYC Emerging OFI Managers, L.P. - Class A	2020	116,000,000	103,207,118	33,386,292.16	106,750,117.21	0.00%	23.24%
KKR-NYC Credit C L.P.	2020	51,515,152	36,247,939	1,824,275.91	33,849,994.32	0.00%	-0.96%
Marathon Centre Street Partnership, L.P. - Asset Class - Subsequent Commitment	2020	87,500,000	67,812,500	-	81,294,701.70	0.31%	8.87%
Torchlight Debt Fund VII, LP	2020	88,000,000	48,453,803	4,453,803.00	48,403,237.00	0.76%	5.93%
400 Capital Centre Street LP	2021	70,000,000	68,999,345	5,340,515.10	68,155,880.00	0.00%	4.93%
Barings Centre Street CLO Equity Partnership L.P.	2022	100,000,000	32,773,682	5,121,731.51	30,749,737.43	0.00%	19.76%
Brightwood Capital Fund V, LP	2022	54,000,000	21,699,003	422,426.00	24,506,336.00	0.00%	11.05%
Centre Street CarVal Partnership LP	2022	106,000,000	26,500,000	-	28,119,725.00	1.84%	8.37%
GCM Grosvenor NYC EM OFI 2022-1	2022	110,000,000	11,370,575	90,029.14	11,209,870.71	0.00%	-1.37%
KLCP Domestic Fund III LP	2022	110,000,000	45,293,986	1,140,630.00	47,544,002.00	0.00%	10.03%
Crestline Opportunity Fund V Onshore T/STE, L.P.	2023	60,000,000	17,532,371	8,396.00	17,523,975.00	0.00%	0.00%
Napier Park Centre Street CLO Partnership Fund LP	2023	100,000,000	10,000,000	-	10,000,000.00	0.00%	0.00%
Torchlight Debt Fund VIII, LP	2023	88,000,000	11,000,000	-	10,429,239.00	-0.71%	-26.05%

Information provided by Alpha Frontier
Above data is not final and subject to change

Alternative Assets Manager Performance Detail



Through June 30, 2023

	Market Value	MTD Return%	3 Month Return%	FYTD Return%	YTD Return%	1 Year Return%	3 Year Return%	ITD Return%	ITD Cumulative Return%
TOTAL HEDGE FUNDS	813,197	-17.44%	-17.85%	-27.97%	-18.46%	-27.97%	-4.56%	-0.48%	-5.59%
TOTAL DIRECT HEDGE FUNDS	813,197	-17.44%	-17.85%	-27.97%	-18.46%	-27.97%	-4.56%	-0.02%	-0.19%
FUND OF FUNDS HEDGE FUNDS	-	0.00%		0.00%	0.00%			1.83%	12.03%
TOTAL DIRECT HEDGE FUNDS									
Luxor Capital Partners Liquidating SPV, LLC.	813,197	-17.44%	-17.85%	-27.97%	-18.46%	-27.97%	-14.42%	-9.37%	-49.79%
Event Driven	813,197	-17.44%	-17.85%	-27.97%	-18.46%	-27.97%	-4.56%	-2.32%	-23.03%
FUND OF FUNDS HEDGE FUNDS									
Fund of Funds Hedge Funds	-	0.00%		0.00%	0.00%			1.83%	12.03%

Information provided by Alpha Frontier



**New York City
Employees' Retirement System**

Appendix D

Footnotes



Through June 30, 2023

General Notes

- Estimated management fees for public market investments are calculated on an accrual basis without adjustment for management fee caps. Alternative investment (Private Market) fees are recorded on a cash basis and are not inclusive of carried interest paid. Since not all alternative managers currently provide detailed fee disclosure, the alternative investment fees noted here are not comprehensive.
- Returns greater than 1 year are annualized.
- Public Market returns are Net of Manager Fees for periods after January 2014 and Gross of investment advisory fees for other periods unless otherwise indicated.
- Public market excess returns for periods prior to 2014 are based on Gross performance.

Page Specific

Pages 8 - 13 - Portfolio Asset Allocation

- **Rebalancing Ranges:** the minimum and maximum weights that actual Asset Allocation may reach before rebalancing between Asset Classes is necessary.

Pages 14 -16 - Performance Attribution: Total Plan

- **Plan Return at Policy Weights:** the return of the Total Plan assuming actual Asset Class results were maintained at target (Adjusted Policy) weights. *Figure = (Return of Asset Class 1* Target Weight) plus (Return Of Asset Class 2* Target Weight) plus (.....)*
- **Allocation Effect** = Total Plan Return minus Plan Return at Adjusted Policy Weights. Allocation is the Contribution to Performance resulting from an overweight or underweight to an asset class. E.g. an underweight to an Asset Class that under-performs results in a positive Allocation Effect and vice versa.
- **Selection Effect** = Equal to the Custom Benchmark (Adjusted Policy Index) Return minus Plan Return at Adjusted Policy Weights. This illustrates how the Managers have added or removed value based on their Security Selection decisions, e.g., *If the manager's Actual Returns are higher than the Implied Return there will be a positive Selection Effect.*
- **Policy Index = Custom Benchmark**
The "policy index" is a custom benchmark representing the weighted average return of the weighted benchmark indexes for each major investment program. Weights may reflect an adjustment of actual policy for outstanding commitments for new or revised programs, such as for private market programs, which are invested gradually, or for any new or updated program requiring the completion of RFPs



Through June 30, 2023

and contracts. The policy index/custom benchmark is calculated monthly based on adjusted policy weights at the beginning of each month.

The indexes and most recent policy weights are as follows:

U.S. Equity: Russell 3000 * 27.24%

International Developed (EAFE) Markets: MSCI World ex USA IMI * 11.31%

International Active- Global: MSCI World Net Dividends Index * 1.10%

Emerging Markets: MSCI Custom ERS Emerging Markets (Net) * 4.84%

International Emerging Managers FOF: NYC Blended Custom Benchmark for FoF * 0.79%

REITs: Dow Jones Real Estate Securities * 0.00%

Private Equity: Russell 3000 + 300 b.p. per annum * 8.00%

Private Real Estate – Core: NFI - ODCE Net * 3.50%

Private Real Estate – Non Core: NFI - ODCE Net + 200bps * 3.17%

Infrastructure: CPI + 4% * 2.44%

Hedge Funds: HFRI Fund of Funds Composite Index plus 1% * 0.00%

US Treasury Short Term: FTSE US Government Bond 1-3 Years Index * 2.93%

US Treasury Intermediate: USBIG TSY AGN 1-10 * 3.42%

Active Government: NYC Treasury Agency + 5 * 2.45%

US Treasury Long Duration: FTSE US Government Bond 10+ Years Index * 0.98%

Core FI-Developing Managers: Bloomberg U.S. Aggregate * 0.00%

Core FI-Emerging Managers: Bloomberg U.S. Aggregate * 0.00%



Through June 30, 2023

*Mortgage: Bloomberg US Mortgage Backed Securities * 6.12%*

*ETI: ETI Custom Benchmark * 1.05%*

*Investment Grade Corporate: NYC Custom IGC Benchmark * 7.03%*

*High Yield: Bloomberg U.S. HY - 2% Issuer Cap * 3.75%*

*Bank Loans: Credit Suisse Leveraged Loan * 0.00%*

*TIPS: Bloomberg Global Infl-Linked: U.S. TIPS * 3.39%*

*Convertible Bonds: ICE BofA All US Conv Ex Mandatory * 2.00%*

*Opportunistic Fixed: OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum * 4.51%*

Page 17 – Allocation and Selection Effects - Asset Class Breakdown

- This chart aims to break down the Allocation and Selection Effects shown on the Performance Attribution pages. The aim of the Page is to show the asset classes where Managers are either out performing or under performing their benchmark and to show the basis point effect that this is having on Plan performance.



Through June 30, 2023

-
- [1] NYC Developed Value Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Value Net to MSCI World ex USA Net Index.
 - [2] NYC Developed Growth Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Growth to MSCI World ex USA Net Index.
 - [3] NYC Custom World ex US Index: Beginning 2.2017 benchmark changed from MSCI EAFE to MSCI World ex USA Net Index.
 - [4] Name changed from SSGA MSCI EAFE Small Cap Index 12.2017
 - [5] World ex USA SC PASSIVE CUSTOM BM: Beginning 12.2017 benchmark changed from MSCI EAFE Small Cap Net to MSCI World ex US Small Cap (Net).
 - [6] NYCERS Custom EM Index: Beginning 7.2018 benchmark changed from FTSE Custom NYCERS All Emerging Index to MSCI Custom NYCERS Emerging Markets Net. Beginning 4.2021 benchmark changed to MSCI Emerging Markets.
 - [7] NYCERS Custom Passive EM Index: Beginning 4.2021 benchmark changed from MSCI Custom NYCERS Emerging Markets Net to MSCI Emerging Markets.
 - [8] NYC Blended Custom Benchmark for FoF: Beginning 5.2021 benchmark composition changed from 85% MSCI World ex USA IMI NR / 15% MSCI Custom NYCERS Emerging Markets Net to MSCI ACWI ex USA IMI Net.
 - [9] NYC Blended Xponance Benchmark for ERS: Beginning 4.2021 benchmark changed from NYC Blended Custom Benchmark for FoF to MSCI ACWI ex USA IMI Net.
 - [10] NYC Custom Mortgage Benchmark: Beginning 9.2020 benchmark changed from FTSE Mortgage Index to Bloomberg US Mortgage Backed Securities.
 - [11] NYC Custom IGC Benchmark: Beginning 3.2021 benchmark changed from NYC - Investment Grade Credit to Bloomberg U.S. Corporate Inv Grade.
 - [12] Assets were in transition from 9/29/17 to 2/11/19

ETI Quarterly Report (Public):

NYCERS - Economically Targeted Investments Quarterly Report

Public/Private Apartment Rehabilitation Program (PPAR)

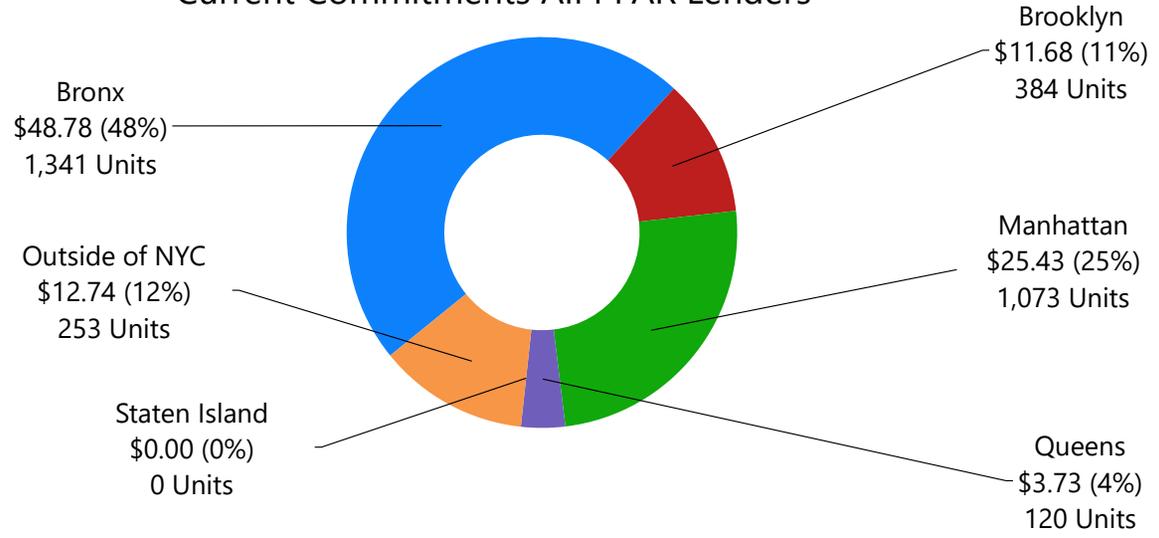
Lenders	Bank of America		Citi Community Development		Carver Federal Savings Bank		The Community Preservation Corp		JP Morgan Chase		Low Income Investment Fund		NCB Capital Impact*		Neighborhood Housing Service		Wells Fargo		Local Initiatives Support Corp		Enterprise Cmty Loan Fund		NYC HDC	
Contractual Commitment	\$80.00		\$40.00		\$10.00		\$290.00		\$145.00		\$25.00		\$0.00		\$3.00		\$70.00		\$12.00		\$12.00		\$20.00	
Current Market Value	\$22.65		\$22.82		\$2.47		\$154.99		\$106.72		\$11.68		\$1.53		\$0.33		\$27.11		\$4.97		\$2.10		\$0.00	
Commitments Q2 (included in total)	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$1.46	75	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Brooklyn	0.00	0	0.00	0	0.00	0	0.22	6	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	0.97	28	0.00	0	4.65	207	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$1.20	34	\$0.00	0	\$6.11	282	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Delivered Q2 (included in total)																								
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$2.29	52	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Brooklyn	0.00	0	0.00	0	0.00	0	1.67	50	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	1.00	18	0.44	13	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	2.41	73	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$7.38	193	\$0.44	13	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Total Commitments																								
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$32.04	954	\$10.87	121	\$1.46	75	\$0.00	0	\$0.00	0	\$0.00	0	\$3.14	90	\$1.28	101	\$0.00	0
Brooklyn	0.00	0	1.05	0	0.00	0	8.53	215	0.00	0	1.09	95	0.00	0	0.00	0	0.00	0	1.01	74	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	13.35	561	3.14	84	5.72	289	0.00	0	0.00	0	0.00	0	2.69	113	0.54	26	0.00	0
Queens	0.00	0	0.00	0	0.00	0	3.73	120	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	12.74	253	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$1.05	0	\$0.00	0	\$70.39	2,103	\$14.01	205	\$8.26	459	\$0.00	0	\$0.00	0	\$0.00	0	\$6.83	277	\$1.81	127	\$0.00	0
Historical Investments																								
Bronx	\$18.31	1,276	\$14.26	802	\$0.00	0	\$142.84	8,376	\$98.16	2,972	\$3.06	178	\$0.00	0	\$0.00	0	\$3.94	90	\$1.27	48	\$0.00	0	\$0.00	0
Brooklyn	6.92	142	9.49	481	0.00	0	138.92	5,699	28.70	836	5.78	401	0.00	0	0.66	7	8.70	130	1.86	82	2.48	360	0.00	0
Manhattan	7.24	148	3.70	283	3.74	236	101.01	5,214	53.75	1,708	8.76	498	1.98	123	0.50	15	16.89	203	2.44	65	0.00	0	0.00	0
Queens	15.17	293	0.80	54	0.00	0	24.05	897	21.35	755	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.26	8	1.28	35	0.00	0	0.00	0	0.00	0	1.26	67	0.00	0	0.00	0	0.00	0
Outside of NYC	1.61	39	2.11	41	0.00	0	26.05	797	9.08	197	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$49.25	1,898	\$30.36	1,661	\$3.74	236	\$433.13	20,991	\$212.32	6,503	\$17.60	1,077	\$1.98	123	\$1.17	22	\$30.79	490	\$5.57	195	\$2.48	360	\$0.00	0

Note: Dollar amount listed in millions
 * NCB Capital Impact's Buy-Sell Agreement terminated effective 1/29/2014.

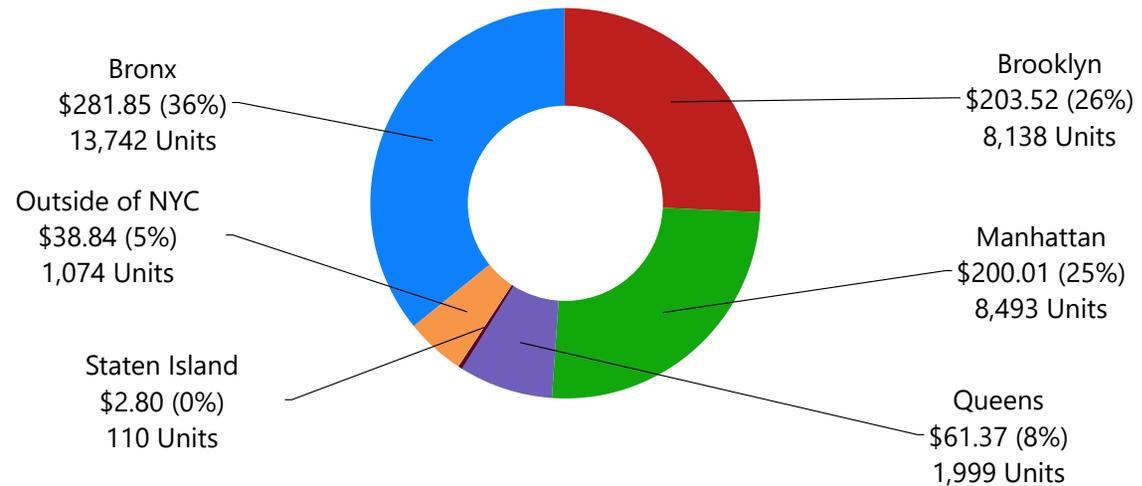
NYCERS - Economically Targeted Investments Quarterly Report

Public/Private Apartment Rehabilitation Program (PPAR)

Current Commitments All PPAR Lenders



Historical Investments Since Inception All PPAR Lenders



Lenders	All Lender Totals	
Contractual Commitment	\$707.00	
Current Market Value	\$357.37	
	Dollars	Units
Commitments Q2 (included in total)		
Bronx	\$1.46	75
Brooklyn	0.22	6
Manhattan	5.63	235
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	0.00	0
Total	\$7.31	316
Delivered Q2 (included in total)		
Bronx	\$2.29	52
Brooklyn	1.67	50
Manhattan	1.44	31
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	2.41	73
Total	\$7.81	206
Total Commitments		
Bronx	\$48.78	1,341
Brooklyn	11.68	384
Manhattan	25.43	1,073
Queens	3.73	120
Staten Island	0.00	0
Outside of NYC	12.74	253
Total	\$102.36	3,171
Historical Investments		
Bronx	\$281.85	13,742
Brooklyn	203.52	8,138
Manhattan	200.01	8,493
Queens	61.37	1,999
Staten Island	2.80	110
Outside of NYC	38.84	1,074
Total	\$788.40	33,556

Note: Dollar amount listed in millions

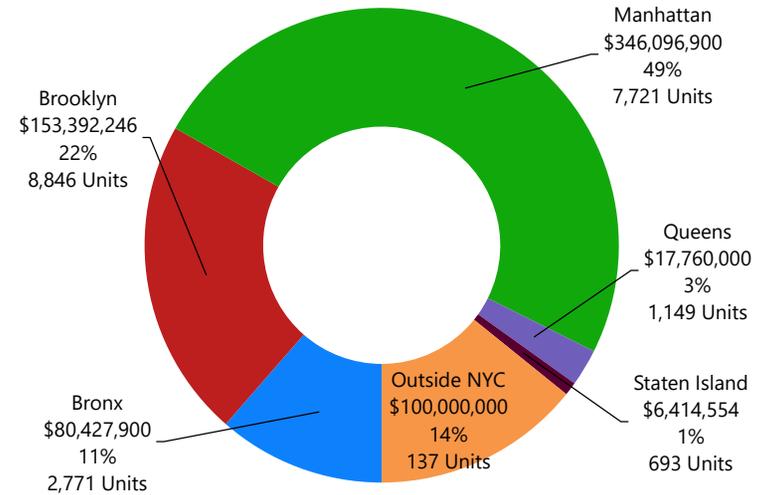
NYCERS - Economically Targeted Investments Quarterly Report

AFL-CIO Housing Investment Trust (HIT)
Market Value \$308.53 million¹

NYC Community Investment Initiative (NYCCII)

Borough	NYCCII Phase I: 2002 - 2005		NYCCII Phase II: 2006 - 2013		Grand Total	
	Investments	Units ²	Investments	Units ²	Investments	Units ²
Bronx	\$27,600,000	2,010	\$52,827,900	761	\$80,427,900	2,771
Brooklyn	49,501,800	3,230	103,890,446	5,616	153,392,246	8,846
Manhattan	172,021,700	6,908	174,075,200	813	346,096,900	7,721
Queens	0	0	17,760,000	1,149	17,760,000	1,149
Staten Island	0	0	6,414,554	693	6,414,554	693
Outside NYC	0	0	100,000,000	137	100,000,000	137
Total	\$249,123,500	12,148	\$454,968,100	9,169	\$704,091,600	21,317

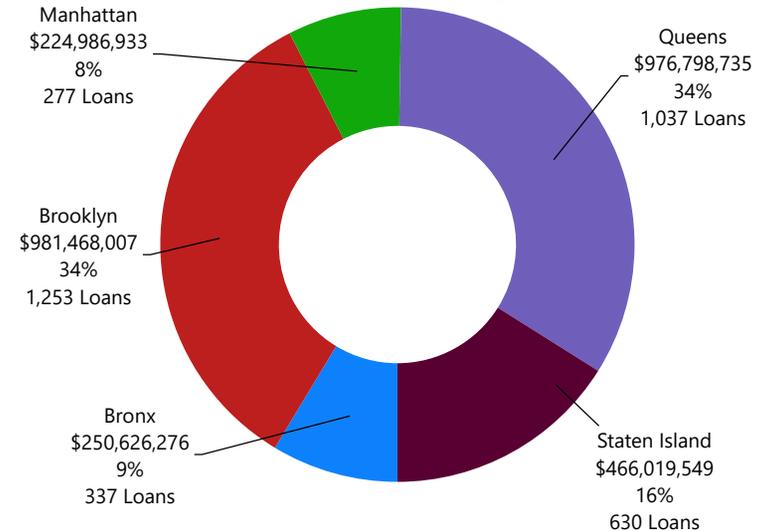
NYCCII Multifamily Program



HIT Home Mortgage Program

Borough	NYCCII Phase I: 2002 - 2005		NYCCII Phase II: 2006 - 2013		Grand Total	
	\$ Amount	Loans	\$ Amount	Loans	\$ Amount	Loans
Bronx	\$32,544,168	41	\$218,082,108	296	\$250,626,276	337
Brooklyn	116,575,736	138	864,892,271	1,115	981,468,007	1,253
Manhattan	10,742,253	12	214,244,680	265	224,986,933	277
Queens	82,399,317	64	894,399,418	973	976,798,735	1,037
Staten Island	106,039,089	191	359,980,460	439	466,019,549	630
Total	\$348,300,563	446	\$2,551,598,937	3,088	\$2,899,899,500	3,534

Home Mortgage Program



NYCERS Loans	Phase I:	134	Phase II:	780	Total:	914
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¹Interest is reinvested

²Low/Moderate Income Units

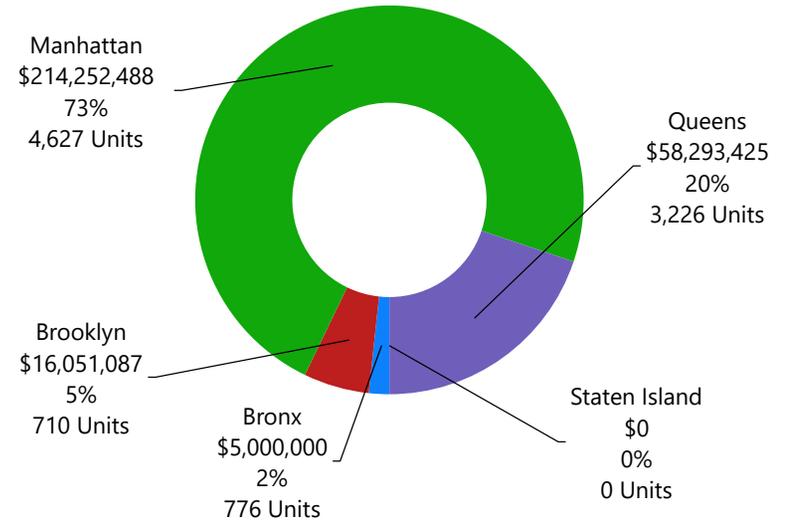
NYCERS - Economically Targeted Investments Quarterly Report

AFL-CIO Housing Investment Trust (HIT)

NYC Workforce Housing Investments: 2009 - 2015

Borough	Investments Since Inception	LMI Units Since Inception
Bronx	\$5,000,000	776
Brooklyn	16,051,087	710
Manhattan	214,252,488	4,627
Queens	58,293,425	3,226
Staten Island	0	0
Total	\$293,597,000	9,339

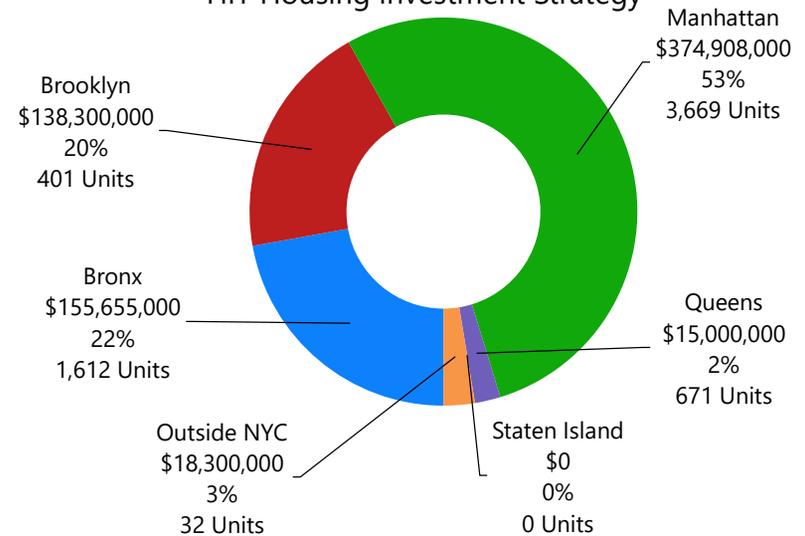
NYC Workforce Housing Investments



HIT Housing Investment Strategy: 2015 - Q2 2023

Borough	Q2 Investments	Investments Since Inception	Q2 Units	LMI Units Since Inception
Bronx	\$0	\$155,655,000	0	1,612
Brooklyn	0	138,300,000	0	401
Manhattan	93,650,000	374,908,000	234	3,669
Queens	0	15,000,000	0	671
Staten Island	0	0	0	0
Outside NYC	0	18,300,000	0	32
Total	\$93,650,000	\$702,163,000	234	6,385

HIT Housing Investment Strategy



NYCERS - Economically Targeted Investments Quarterly Report

RBC ACCESS CAPITAL STRATEGIES (Since Inception 2/1/07)

\$162 million Allocated (36% of total account)
Market Value \$147.98 million

Multifamily Investments Detail	\$ Invested ¹		Units ²	
	Q2	Total	Q2	Total
Bronx	\$369,000	\$51,315,799	180	20,149
Brooklyn	0	29,014,817	0	15,373
Manhattan	0	45,174,391	0	7,281
Queens	0	7,763,538	0	920
Staten Island	0	2,005,981	0	75
Total NYCERS Multifamily Investments	\$369,000	\$135,274,526	180	43,798
Multifamily Total All Systems	\$1,025,000	\$375,762,572	180	43,798

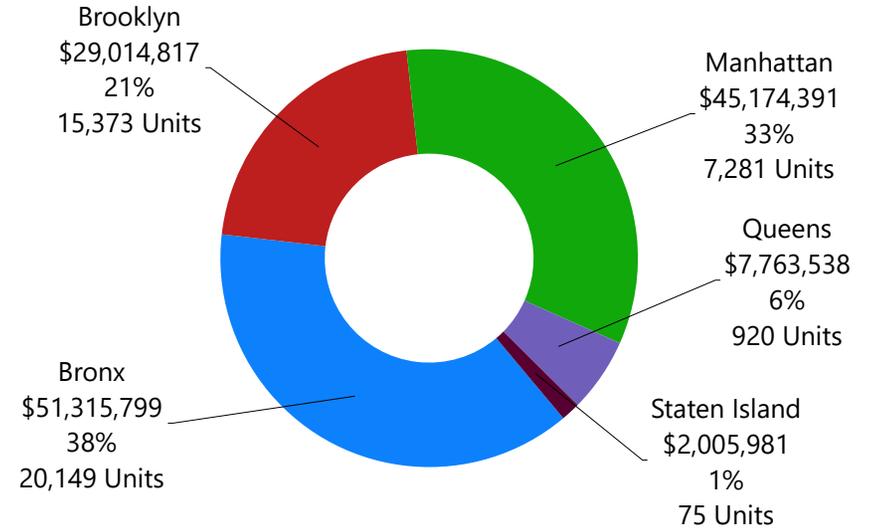
Single Family Investments Detail	\$ Invested		Units	
	Q2	Total	Q2	Total
Bronx	\$422,704	\$26,702,264	2	322
Brooklyn	478,933	66,788,813	3	731
Manhattan	0	5,868,138	0	65
Queens	1,268,015	103,041,957	7	1,052
Staten Island	1,519,311	69,119,756	10	709
Total NYCERS Single Family Investments	\$3,688,963	\$271,520,929	22	2,879
Single Family Total All Systems	\$10,247,120	\$754,224,803	22	2,879

Other Investments Detail	\$ Invested		Loans	
	Q2	Total	Q2	Total
Bronx	\$0	\$243,000	0	1
Brooklyn	0	1,940,545	0	8
Manhattan	0	875,846	0	5
Queens	0	195,636	0	3
Staten Island	0	0	0	0
Total NYCERS Other Investments	\$0	\$3,255,026	0	17
Other Investments Total All Systems	\$0	\$9,041,740	0	17

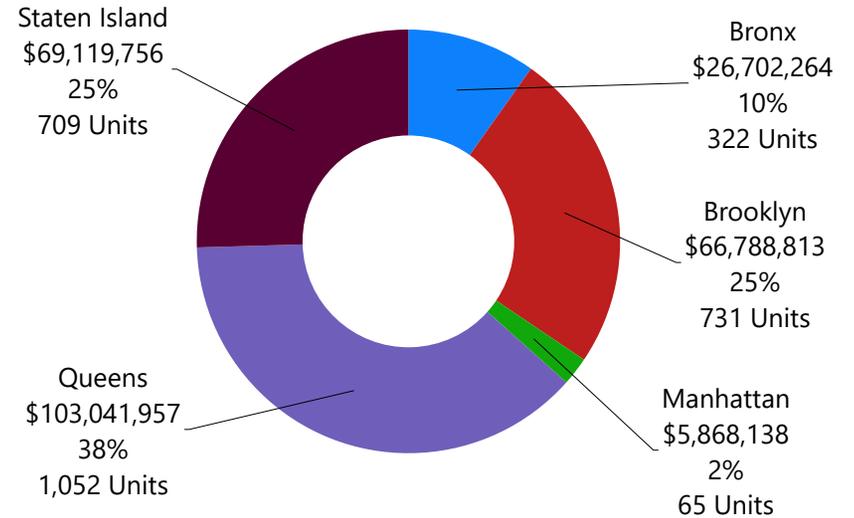
Grand Total NYCERS	\$4,057,963	\$410,050,481
Grand Total All Systems	\$11,272,120	\$1,139,029,115

¹ Certain bond investment amounts are allocated pro rata across boroughs based upon unit count.
² If not indicated otherwise, superintendent units are allocated based on building size.

RBC Access Multifamily Investments Since Inception



RBC Access Single Family Investments Since Inception



NYCERS - Economically Targeted Investments Quarterly Report

ETI Real Estate Equity Investments

Total Market Value \$110.62 million

Hudson Market Value \$33.17 million

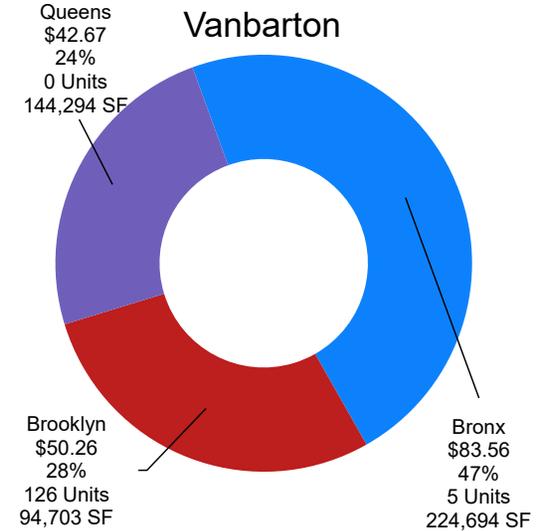
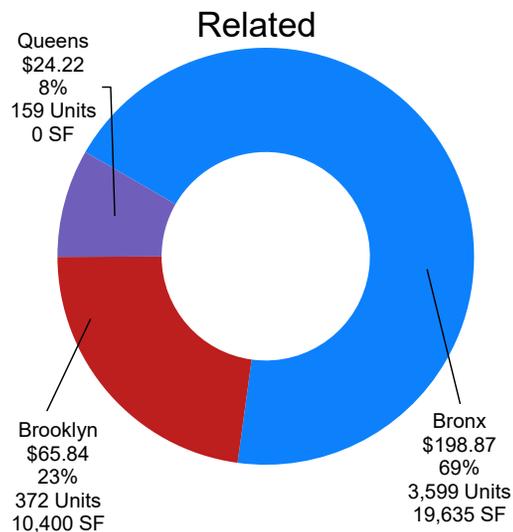
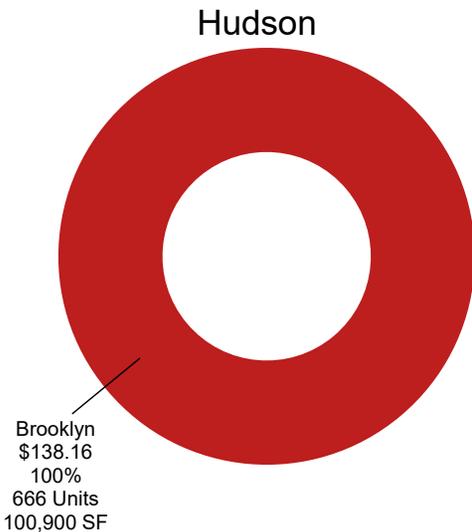
Borough	Gross			
	Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$0.00	0	0	0
Brooklyn	138.16	666	666	100,900
Manhattan	0.00	0	0	0
Queens	0.00	0	0	0
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$138.16	666	666	100,900

Related Market Value \$46.40 million

Borough	Gross			
	Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$198.87	3,599	3,356	19,635
Brooklyn	65.84	372	212	10,400
Manhattan	0.00	0	0	0
Queens	24.22	159	151	0
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$288.93	4,130	3,719	30,035

Vanbarton (Emmes) Market Value \$31.05 million

Borough	Gross			
	Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$83.56	5	2	224,694
Brooklyn	50.26	126	61	94,703
Manhattan	0.00	0	0	0
Queens	42.67	0	0	144,294
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$176.49	131	63	463,691



*All information is derived from reports submitted by individual managers and State Street Bank, and is reported on a quarter lag. Performance has not been reviewed by consultants or custodial bank.

**Dollar amounts listed in millions.

Private Equity Quarterly Report (Public):

PRIVATE EQUITY MONITORING REPORT

For the period ended March 31, 2023

Report Prepared at the Specific Request of:

Client:

New York City Employees' Retirement System



IMPORTANT INFORMATION

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On September 20, 2021, StepStone Group Inc. acquired Greenspring Associates, Inc. (“Greenspring”). Upon the completion of this acquisition, the management agreement of each Greenspring vehicle was assigned to StepStone Group LP.

The report is being made based on the understanding that each recipient has sufficient knowledge and experience to evaluate the merits and risks of investing in private market products. All expressions of opinion are intended solely as general market commentary and do not constitute investment advice or a guarantee of returns. All expressions of opinion are as of the date of this document, are subject to change without notice and may differ from views held by other businesses of StepStone. All valuations are based on current values calculated in accordance with StepStone’s Valuation Policies and may include both realized and unrealized investments. Due to the inherent uncertainty of valuation, the stated value may differ significantly from the value that would have been used had a ready market existed for all of the portfolio investments, and the difference could be material. The long-term value of these investments may be lesser or greater than the valuations provided. StepStone Group LP, its affiliates and employees are not in the business of providing tax, legal or accounting advice. Any tax-related statements contained in these materials are provided for illustration purposes only and cannot be relied upon for the purpose of avoiding tax penalties. Any taxpayer should seek advice based on the taxpayer’s particular circumstances from an independent tax advisor. Prospective investors should inform themselves and take appropriate advice as to any applicable legal requirements and any applicable taxation and exchange control regulations in the countries of their citizenship, residence or domicile which might be relevant to the subscription, purchase, holding, exchange, redemption or disposal of any investments. Each prospective investor is urged to discuss any prospective investment with its legal, tax and regulatory advisors in order to make an independent determination of the suitability and consequences of such an investment.

An investment involves a number of risks and there are conflicts of interest. Please refer to the risks and conflicts disclosed herein.

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All data is as of March 31, 2023 unless otherwise noted. **PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. ACTUAL PERFORMANCE MAY VARY.**

EXECUTIVE SUMMARY

As of March 31, 2023. In USD millions.

	INCEPTION TO MARCH 31, 2023	INCEPTION TO DECEMBER 31, 2022	INCEPTION TO MARCH 31, 2022	QUARTERLY CHANGE	ANNUAL CHANGE
Number of Managers	126	126	122	0	4
Number of Investments	292	285	264	7	28
Committed Capital	\$16,766.3	\$16,290.2	\$14,944.2	\$476.1	\$1,822.1
Contributed Capital	13,788.8	13,538.2	12,531.3	250.5	1,257.5
Distributed Capital	13,476.0	13,277.5	12,541.7	198.5	934.3
Market Value	8,301.7	8,047.6	7,965.1	254.1	336.6
Total Value	21,777.7	21,325.1	20,506.9	452.7	1,270.9
Total Gain/(Loss)	7,989.0	7,786.8	7,975.5	202.1	13.4
Unfunded Commitment	4,563.8	4,314.3	3,917.2	249.4	646.6
Total Exposure	12,865.5	12,361.9	11,882.3	503.6	983.1
DPI	1.0x	1.0x	1.0x	0.0x	0.0x
TVM	1.6x	1.6x	1.6x	0.0x	-0.1x
IRR	11.1%	11.1%	11.7%	(1 bps)	(58 bps)
TVM Net of StepStone Fees	1.6x	1.6x	1.6x	0.0x	(0.1x)
IRR Net of StepStone Fees	11.1%	11.1%	11.7%	(1 bps)	(58 bps)

Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses.

IRR and TVM for certain vehicles may have been impacted by StepStone's or the underlying GPs' use of subscription-backed credit facilities by such vehicles. Reinvested/recycled amounts increase contributed capital. Unless otherwise indicated, all underlying investment attribution and performance information presented is net of fees and expenses charged by the underlying investment, but gross of StepStone vehicle/account fees and expenses. Where indicated, net return figures presented for StepStone vehicle/account performance include fees and expenses paid to StepStone.

PERIODIC RETURNS VS. RUSSELL 3000® INDEX

As of March 31, 2023. In USD millions.

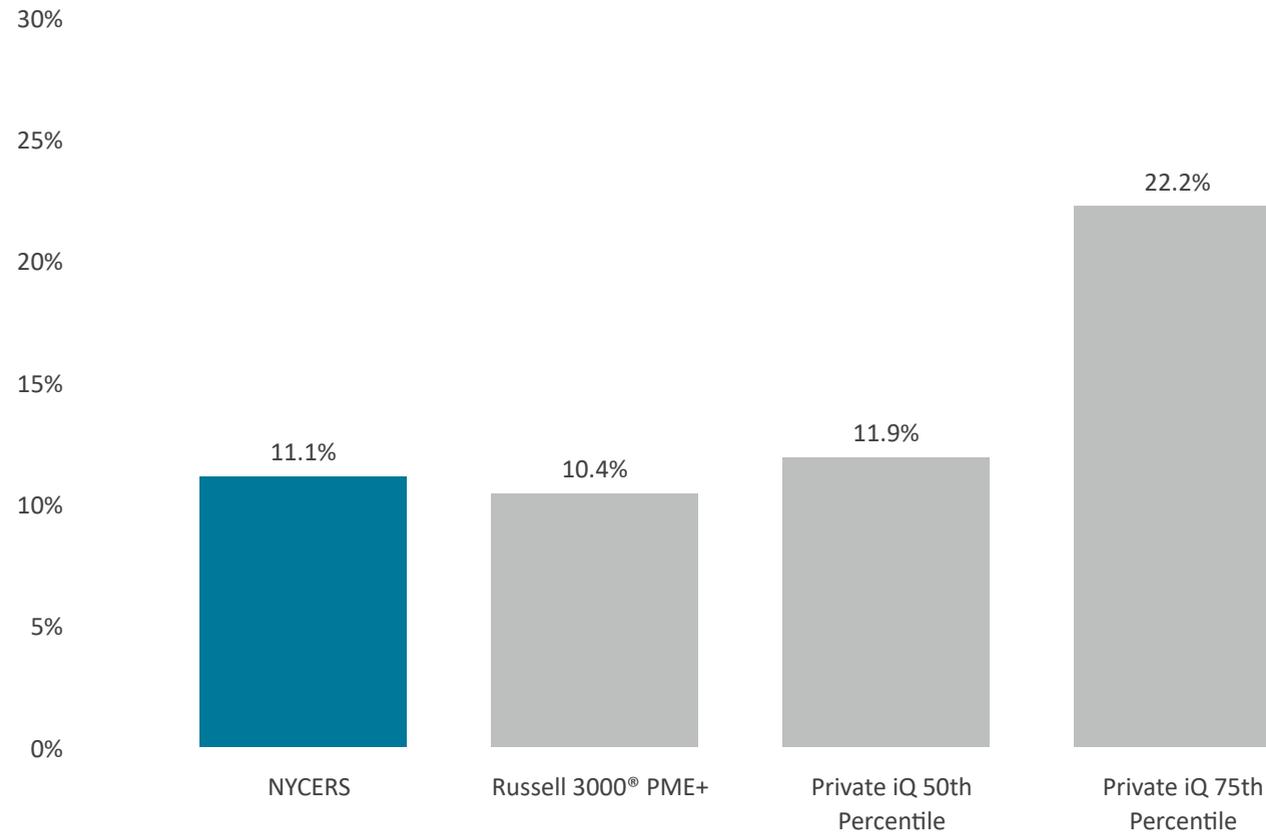
INDEX	3-MONTH IRR	1-YEAR IRR	3-YEAR IRR	5-YEAR IRR	10-YEAR IRR	INCEPTION IRR
NYCERS IRR	2.5%	0.2%	23.4%	15.5%	13.3%	11.1%
RUSSELL 3000®	7.3%	-7.5%	18.2%	10.4%	12.0%	10.4%
RUSSELL 3000® + 300 bps	10.3%	-4.5%	21.2%	13.4%	15.0%	13.4%
NYCERS OUTPERFORMANCE/(UNDERPERFORMANCE)						
VS. RUSSELL 3000® + 300 bps	-7.8%	4.7%	2.2%	2.1%	-1.7%	-2.3%

The referenced indices/benchmarks are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

PERFORMANCE SUMMARY CONTINUED

The following table illustrates the Portfolio's point-to-point investment performance as of March 31, 2023, the public market equivalent (PME+) based on the Russell 3000 (TR) index and the Burgiss 50th and 75th percentiles.

PORTFOLIO VS. BENCHMARKS



Return is a dollar-weighted PME+ calculation of daily changes in the Russell 3000® Index. Russell Investment Group is the source and owner of the trademark, service marks and copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.

Private iQ benchmark reflects Equity (all sub-sectors), Mezzanine, Distressed, Oil & Gas Assets asset classes, 50th percentile, or median, IRR at March 31, 2023 for funds with vintage years from 1998 through 2022. Note: Data may be subject to change.

Private iQ benchmark reflects Equity (all sub-sectors), Mezzanine, Distressed, Oil & Gas Assets asset classes, 75th percentile, or median, IRR at March 31, 2023 for funds with vintage years from 1998 through 2022. Note: Data may be subject to change.

The referenced indices are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

PORTFOLIO DIVERSIFICATION BY STRATEGY/SUB-STRATEGY

As of March 31, 2023. In USD millions.

STRATEGY	MARKET VALUE	% OF TOTAL	UNFUNDED	% OF TOTAL	EXPOSURE	% OF TOTAL
Buyout	\$5,026.0	60.5%	\$2,784.6	61.0%	\$7,810.7	60.7%
Mega Buyout	\$2,554.4	30.8%	\$1,612.9	35.3%	\$4,167.2	32.4%
Large Buyout	\$1,460.4	17.6%	\$840.9	18.4%	\$2,301.3	17.9%
Middle-Market Buyout	\$706.0	8.5%	\$231.7	5.1%	\$937.7	7.3%
Small Buyout	\$305.3	3.7%	\$99.2	2.2%	\$404.4	3.1%
Special Situations	\$1,442.4	17.4%	\$791.8	17.3%	\$2,234.2	17.4%
Secondaries	\$513.0	6.2%	\$415.4	9.1%	\$928.4	7.2%
Growth Equity	\$939.6	11.3%	\$285.6	6.3%	\$1,225.3	9.5%
Multi-Strategy	\$316.6	3.8%	\$278.7	6.1%	\$595.3	4.6%
Diversified	\$122.4	1.5%	\$173.9	3.8%	\$296.2	2.3%
Co-Investment	\$92.2	1.1%	\$81.4	1.8%	\$173.6	1.3%
Funds	\$102.1	1.2%	\$23.4	0.5%	\$125.5	1.0%
Other	\$64.0	0.8%	\$7.6	0.2%	\$71.6	0.6%
Venture Capital	\$60.2	0.7%	\$3.3	0.1%	\$63.6	0.5%
Mezzanine	\$0.9	0.0%	\$2.8	0.1%	\$3.7	0.0%
Energy	\$2.9	0.0%	\$1.6	0.0%	\$4.4	0.0%
Total	\$8,301.7	100.0%	\$4,563.8	100.0%	\$12,865.5	100.0%

PORTFOLIO DIVERSIFICATION BY FUND GEOGRAPHIC FOCUS

As of March 31, 2023. In USD millions.

GEOGRAPHY	MARKET VALUE	% OF TOTAL	UNFUNDED	% OF TOTAL	EXPOSURE	% OF TOTAL
North America	\$5,327.8	64.2%	\$2,788.6	61.1%	\$8,116.4	63.1%
Western Europe	\$1,516.9	18.3%	\$975.8	21.4%	\$2,492.6	19.4%
Global	\$1,416.1	17.1%	\$731.7	16.0%	\$2,147.8	16.7%
Rest of World	\$40.9	0.5%	\$67.7	1.5%	\$108.6	0.8%
Total	\$8,301.7	100.0%	\$4,563.8	100.0%	\$12,865.5	100.0%

NEW INVESTMENT COMMITMENTS

As of March 31, 2023. In USD millions.

INVESTMENT	MONTH CLOSED	STRATEGY	GEOGRAPHIC FOCUS	COMMITTED CAPITAL
Bridgepoint Europe VII	February 2023	Buyout	Western Europe	\$58.4
Bridgepoint Europe VII Co-Invest	February 2023	Buyout	Western Europe	\$29.2
Valor Equity Partners VI, L.P.	February 2023	Growth Equity	North America	\$52.0
Vista Co-Invest Fund 2022-4, L.P.	March 2023	Buyout	North America	\$41.0
Vista Equity Partners Fund VIII, L.P.	March 2023	Buyout	North America	\$123.0
Apollo Fund X NYC Sidecar Co-Invest, L.P.	March 2023	Special Situations	North America	\$41.0
Apollo Investment Fund X, L.P.	March 2023	Special Situations	North America	\$123.0
Total				\$467.5

SUBSEQUENT INVESTMENT COMMITMENTS

Subsequent to March 31, 2023. In USD millions.

INVESTMENT	MONTH CLOSED	STRATEGY	GEOGRAPHIC FOCUS	COMMITTED CAPITAL
ASF IX B L.P.	April 2023	Secondaries	Global	\$69.2
ASF IX B NYC Co-Invest L.P.	April 2023	Secondaries	Global	\$103.8
New 2ND Capital Fund III, L.P.	May 2023	Secondaries	North America	\$18.0
New 2ND Capital N Sidecar, L.P.	May 2023	Secondaries	North America	\$9.0
Clayton, Dubilier & Rice Fund XII, L.P.	May 2023	Buyout	Global	\$94.0
EQT Future (No.2) SCSp	June 2023	Buyout	Western Europe	\$62.2
EQT Future Co-Invest	June 2023	Buyout	Western Europe	\$62.2
Total				\$418.4

PERFORMANCE BY VINTAGE YEAR

The following table illustrates the Portfolio's since inception investment performance by vintage year as of March 31, 2023 relative to the median quartile U.S. All Private Equity TVM and IRR benchmarks as provided by Private iQ. Performance of funds that are less than two years old are not meaningful. Note that Burgiss Private iQ data is continuously updated and is therefore subject to change.

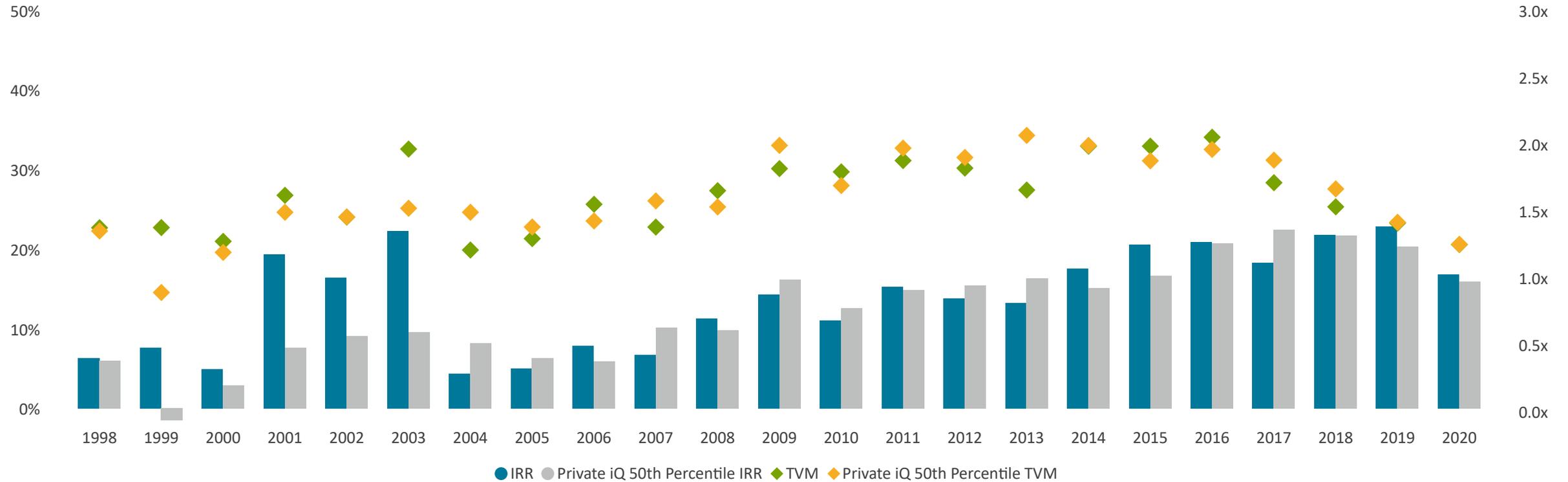
VINTAGE YEAR	COMMIT	CONT	DIST	MARKET VALUE	UNFUNDED	EXPOSURE	TVM	IRR*	PME RETURN*	PME SPREAD*	PRIVATE IQ U.S. ALL PE 50TH PERCENTILE TVM	PRIVATE IQ U.S. ALL PE 50TH PERCENTILE IRR
1998	\$50.0	\$50.2	\$69.1	\$0.0	\$0.0	\$0.0	1.37x	6.3%	3.4%	2.9%	1.35x	6.0%
1999	\$88.6	\$102.1	\$140.3	\$0.1	\$0.0	\$0.1	1.38x	7.6%	6.2%	1.4%	0.89x	(1.5%)
2000	\$116.9	\$137.2	\$173.9	\$0.7	\$0.0	\$0.7	1.27x	5.0%	5.2%	(0.3%)	1.19x	2.9%
2001	\$98.1	\$128.6	\$207.5	\$0.3	\$0.6	\$1.0	1.62x	19.3%	7.7%	11.7%	1.49x	7.7%
2002	\$100.0	\$124.8	\$181.5	\$0.0	\$0.0	\$0.0	1.45x	16.4%	7.1%	9.3%	1.46x	9.1%
2003	\$104.4	\$114.3	\$222.9	\$1.4	\$11.8	\$13.2	1.96x	22.3%	6.8%	15.4%	1.52x	9.6%
2004	\$433.6	\$476.2	\$552.9	\$22.2	\$6.6	\$28.8	1.21x	4.4%	8.0%	(3.6%)	1.49x	8.2%
2005	\$520.7	\$577.4	\$731.7	\$14.9	\$5.5	\$20.4	1.29x	5.0%	7.0%	(2.0%)	1.38x	6.3%
2006	\$993.0	\$1,123.3	\$1,700.3	\$40.8	\$13.1	\$53.9	1.55x	7.9%	8.9%	(1.0%)	1.43x	5.9%
2007	\$940.2	\$1,015.0	\$1,323.6	\$76.3	\$52.7	\$129.0	1.38x	6.7%	11.7%	(5.0%)	1.58x	10.1%
2008	\$1,235.1	\$1,435.8	\$2,119.0	\$252.3	\$63.7	\$316.0	1.65x	11.3%	13.6%	(2.3%)	1.53x	9.8%
2009	\$179.2	\$182.3	\$300.8	\$30.4	\$7.9	\$38.3	1.82x	14.3%	14.5%	(0.2%)	1.99x	16.2%
2010	\$175.0	\$203.8	\$265.6	\$99.6	\$6.0	\$105.6	1.79x	11.0%	12.6%	(1.6%)	1.69x	12.6%
2011	\$886.4	\$934.2	\$1,409.1	\$344.1	\$76.7	\$420.8	1.88x	15.3%	13.0%	2.3%	1.97x	14.9%
2012	\$509.4	\$549.7	\$701.3	\$299.4	\$33.8	\$333.2	1.82x	13.8%	12.2%	1.6%	1.90x	15.4%
2013	\$524.1	\$494.6	\$600.5	\$218.6	\$76.8	\$295.4	1.66x	13.3%	12.5%	0.8%	2.07x	16.4%
2014	\$601.7	\$630.6	\$719.9	\$531.3	\$78.0	\$609.3	1.98x	17.6%	11.9%	5.7%	1.99x	15.1%
2015	\$686.0	\$657.6	\$773.7	\$531.2	\$76.1	\$607.3	1.98x	20.6%	12.1%	8.5%	1.88x	16.7%
2016	\$533.2	\$582.6	\$495.6	\$699.5	\$45.9	\$745.5	2.05x	20.9%	11.5%	9.4%	1.96x	20.7%
2017	\$778.8	\$753.6	\$296.1	\$993.4	\$95.0	\$1,088.4	1.71x	18.3%	9.6%	8.7%	1.88x	22.4%
2018	\$1,140.1	\$936.9	\$272.1	\$1,162.2	\$293.8	\$1,456.1	1.53x	21.8%	8.1%	13.8%	1.67x	21.7%
2019	\$1,169.1	\$871.7	\$150.8	\$1,077.6	\$364.2	\$1,441.8	1.41x	22.9%	3.2%	19.7%	1.42x	20.3%
2020	\$900.1	\$556.3	\$27.2	\$667.3	\$366.2	\$1,033.6	1.25x	16.8%	(1.0%)	17.8%	1.25x	15.9%
2021	\$1,538.0	\$873.5	\$35.3	\$965.8	\$697.6	\$1,663.4	1.15x	NM	NM	NM	NM	NM
2022	\$1,994.9	\$242.5	\$5.5	\$244.1	\$1,756.2	\$2,000.3	1.03x	NM	NM	NM	NM	NM
2023	\$469.6	\$34.1	\$0.0	\$27.9	\$435.6	\$463.5	0.82x	NM	NM	NM	NM	NM
Total	\$16,766.3	\$13,788.8	\$13,476.0	\$8,301.7	\$4,563.8	\$12,865.5	1.58x	11.1%	10.4%	0.7%	1.46x	11.9%

*PME Return = Russell 3000 PME+; PME Spread is calculated as IRR minus PME Return.

*Performance of funds with less than two years of activity is not considered meaningful.

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PERFORMANCE BY VINTAGE YEAR CONTINUED



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PERFORMANCE BY STRATEGY/SUB-STRATEGY

As of March 31, 2023. In USD millions.

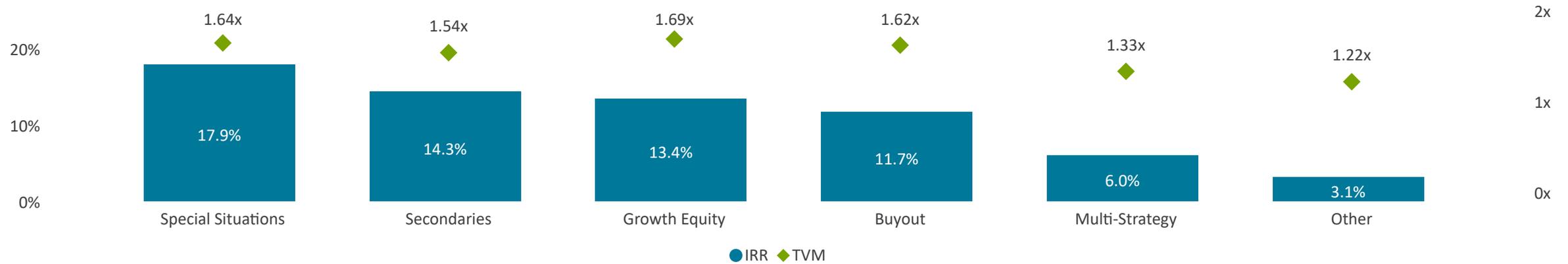
STRATEGY	COMMIT	CONT	DIST	MARKET VALUE	UNFUNDED	EXPOSURE	TVM	IRR*
Buyout	\$9,884.0	\$8,092.4	\$8,066.1	\$5,026.0	\$2,784.6	\$7,810.7	1.62x	11.7%
Mega Buyout	\$3,996.9	\$2,651.2	\$1,573.3	\$2,554.4	\$1,612.9	\$4,167.2	1.56x	13.8%
Large Buyout	\$2,943.1	\$2,405.4	\$2,833.6	\$1,460.4	\$840.9	\$2,301.3	1.79x	14.3%
Middle-Market Buyout	\$1,770.7	\$1,803.3	\$2,067.4	\$706.0	\$231.7	\$937.7	1.54x	9.6%
Small Buyout	\$1,173.3	\$1,232.6	\$1,591.9	\$305.3	\$99.2	\$404.4	1.54x	9.3%
Special Situations	\$2,547.9	\$2,120.1	\$2,039.5	\$1,442.4	\$791.8	\$2,234.2	1.64x	17.9%
Growth Equity	\$1,242.5	\$1,006.8	\$757.4	\$939.6	\$285.6	\$1,225.3	1.69x	13.4%
Secondaries	\$1,375.6	\$958.5	\$958.8	\$513.0	\$415.4	\$928.4	1.54x	14.3%
Multi-Strategy	\$883.4	\$661.3	\$563.3	\$316.6	\$278.7	\$595.3	1.33x	6.0%
Diversified	\$262.0	\$88.1	\$1.5	\$122.4	\$173.9	\$296.2	1.41x	NM
Funds	\$361.7	\$388.9	\$437.9	\$102.1	\$23.4	\$125.5	1.39x	5.5%
Co-Investment	\$259.7	\$184.3	\$123.9	\$92.2	\$81.4	\$173.6	1.17x	5.0%
Other	\$832.9	\$949.6	\$1,091.0	\$64.0	\$7.6	\$71.6	1.22x	3.1%
Venture Capital	\$501.5	\$546.5	\$648.9	\$60.2	\$3.3	\$63.6	1.30x	3.4%
Energy	\$265.0	\$312.3	\$314.4	\$2.9	\$1.6	\$4.4	1.02x	0.3%
Mezzanine	\$66.3	\$90.9	\$127.7	\$0.9	\$2.8	\$3.7	1.42x	13.3%
Total	\$16,766.3	\$13,788.8	\$13,476.0	\$8,301.7	\$4,563.8	\$12,865.5	1.58x	11.1%

*Performance of funds with less than two years of activity is not considered meaningful.

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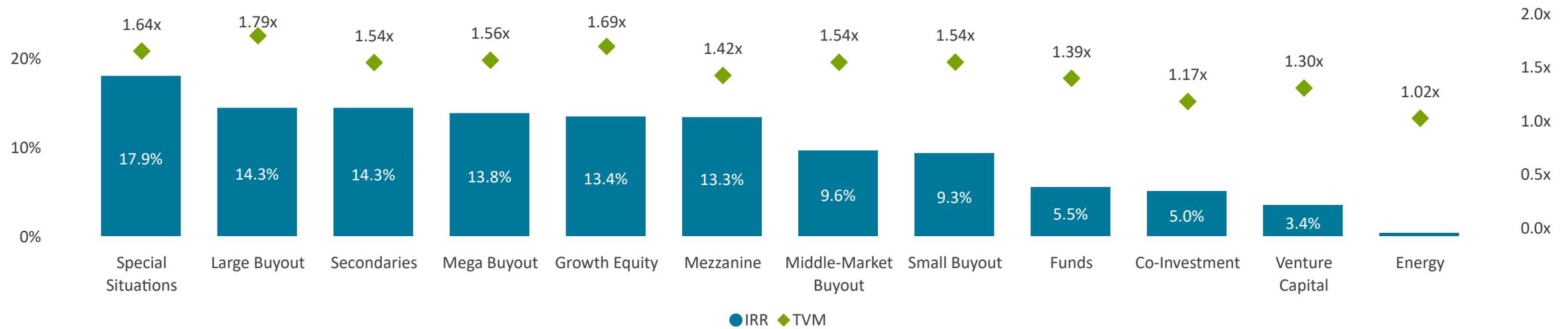
PERFORMANCE BY STRATEGY

As of March 31, 2023. In USD millions.



PERFORMANCE BY SUB-STRATEGY

As of March 31, 2023. In USD millions.



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PERFORMANCE BY STRUCTURE

As of March 31, 2023. In USD millions.

STRUCTURE	COMMIT	CONT	DIST	MARKET VALUE	UNFUNDED	EXPOSURE	TVM	IRR
Fund	\$14,669.8	\$12,597.6	\$12,741.8	\$7,295.5	\$3,587.1	\$10,882.6	1.59x	11.2%
Side Car	\$1,262.9	\$580.2	\$202.0	\$690.0	\$699.2	\$1,389.3	1.54x	19.6%
SMA	\$808.6	\$583.9	\$465.7	\$316.1	\$277.0	\$593.2	1.34x	6.3%
FoF	\$25.0	\$27.1	\$66.6	\$0.0	\$0.4	\$0.4	2.46x	14.9%
Total	\$16,766.3	\$13,788.8	\$13,476.0	\$8,301.7	\$4,563.8	\$12,865.5	1.58x	11.1%

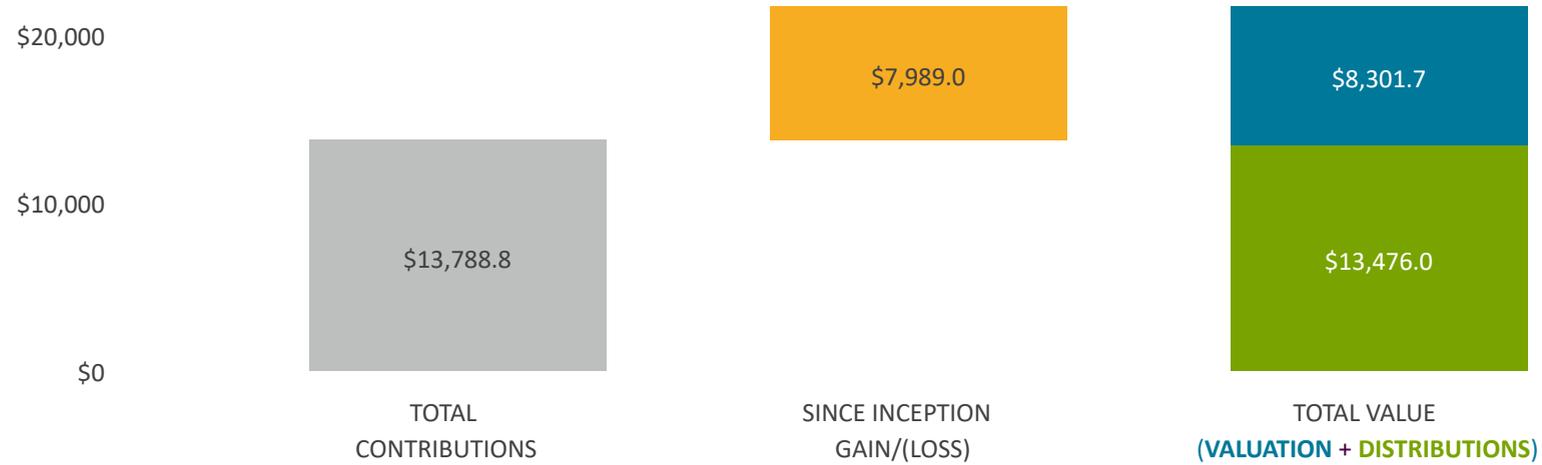
As of March 31, 2023. In USD millions.

DIRECT/CO-INVESTMENTS	COMMIT	CONT	DIST	MARKET VALUE	UNFUNDED	EXPOSURE	TVM	IRR
Direct Investments	\$15,243.7	\$13,024.2	\$13,150.2	\$7,519.5	\$3,783.1	\$11,302.6	1.59x	11.1%
Co-Investment	\$1,522.5	\$764.5	\$325.9	\$782.2	\$780.7	\$1,562.9	1.45x	12.3%
Total	\$16,766.3	\$13,788.8	\$13,476.0	\$8,301.7	\$4,563.8	\$12,865.5	1.58x	11.1%

Unless otherwise indicated, all underlying investment attribution and performance information presented is net of fees and expenses charged by the underlying investment, but gross of StepStone vehicle/account fees and expenses. Where indicated, net return figures presented for StepStone vehicle/account performance include fees and expenses paid to StepStone.

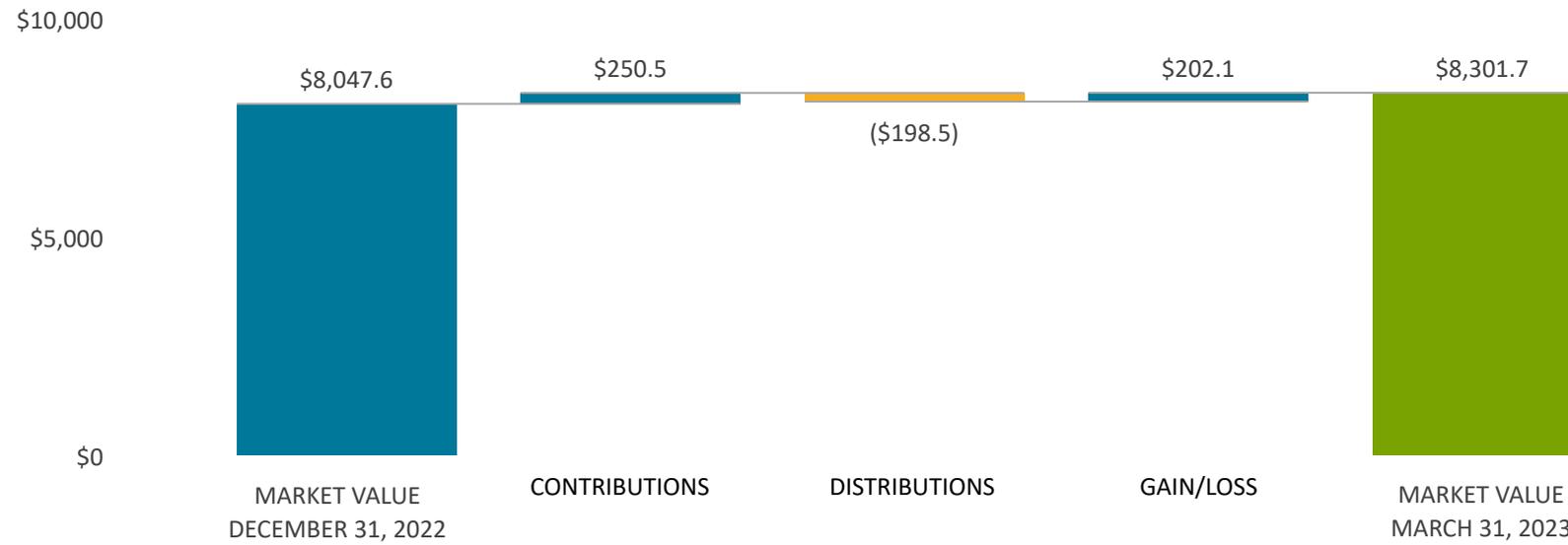
SINCE INCEPTION VALUATION MOVEMENT

Through March 31, 2023, New York City Employees' Retirement System's portfolio has generated a gain of \$7,989.0 million.



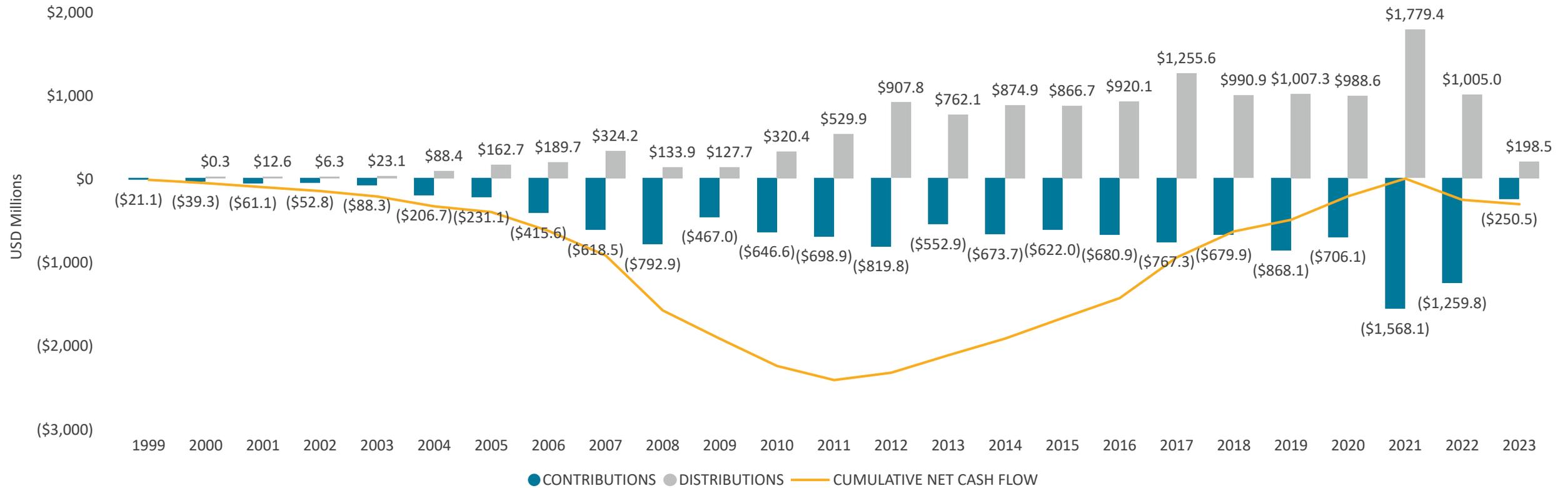
QUARTERLY VALUATION MOVEMENT

During the first quarter of 2023, the value of New York City Employees' Retirement System's portfolio increased by \$202.1 million, or 2.5%.



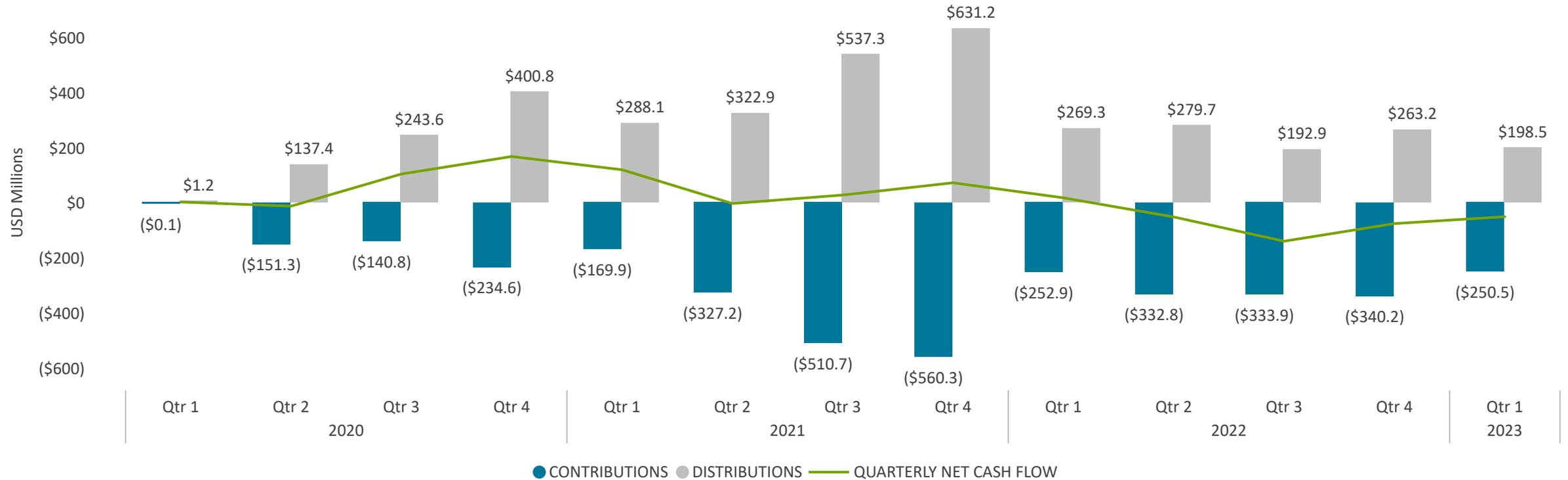
SINCE INCEPTION CASH FLOW ACTIVITY

During the three months ended March 31, 2023, the portfolio contributed \$250.5 million and received \$198.5 million of distributions, for a net cash outflow of \$52.0 million.



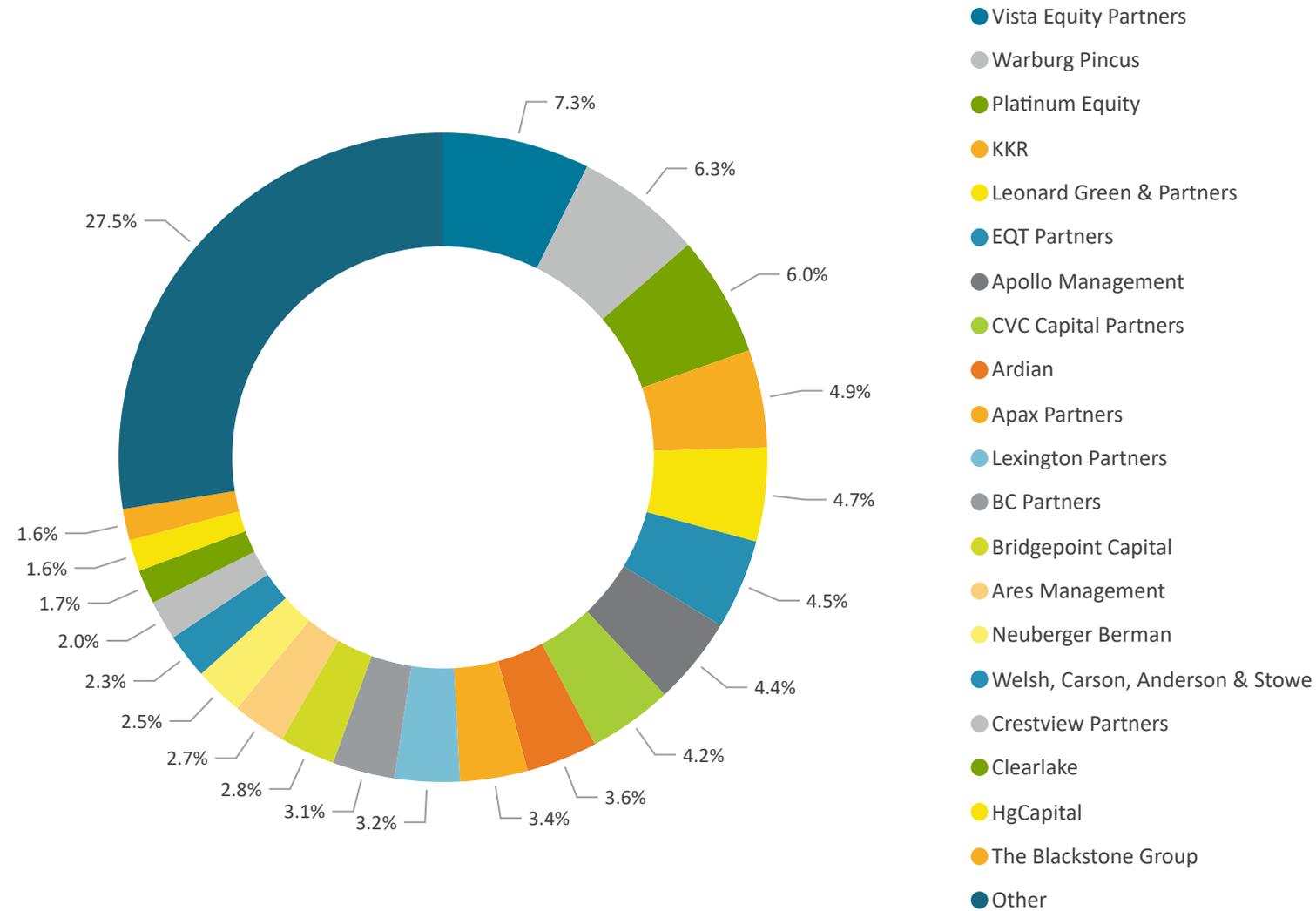
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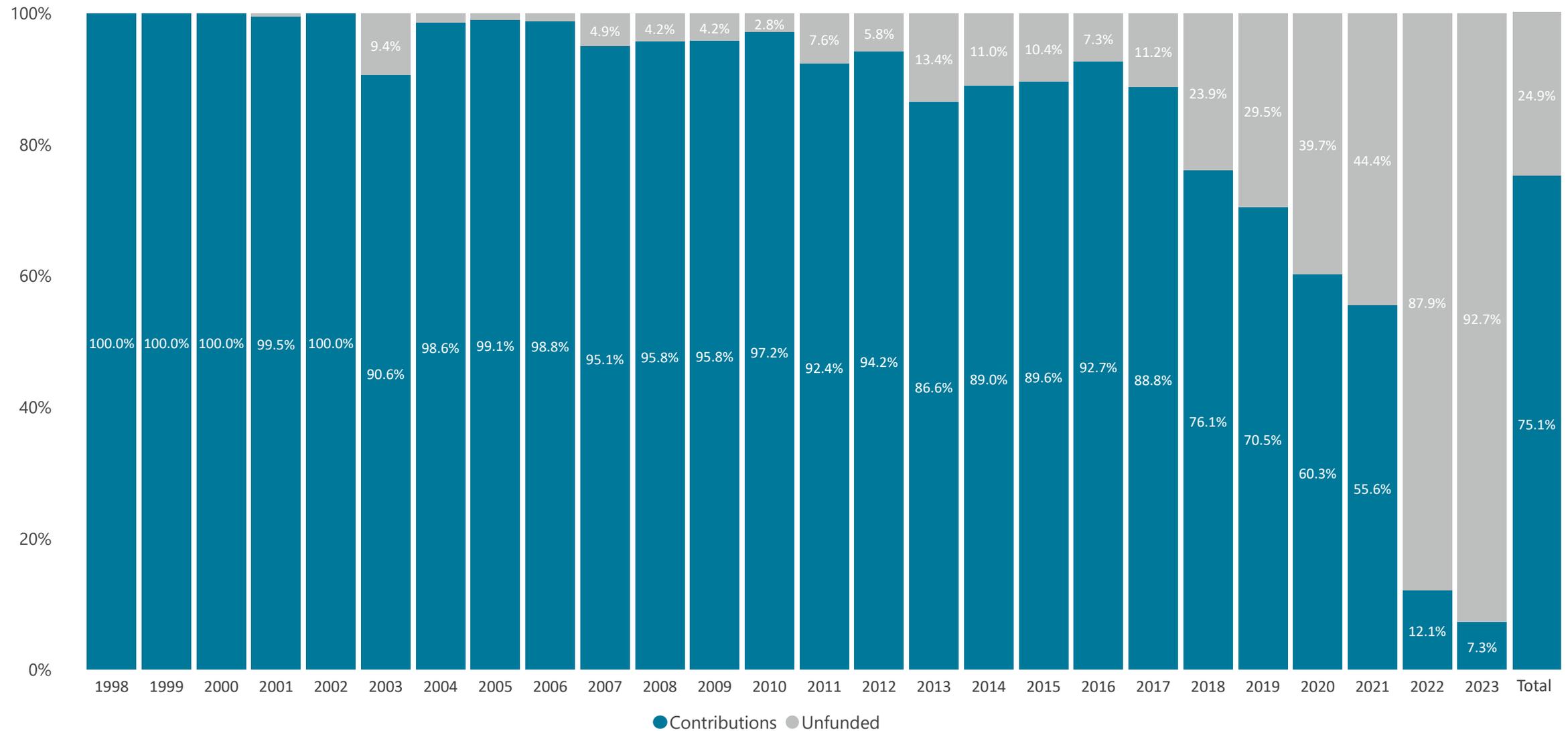


MANAGER DIVERSIFICATION

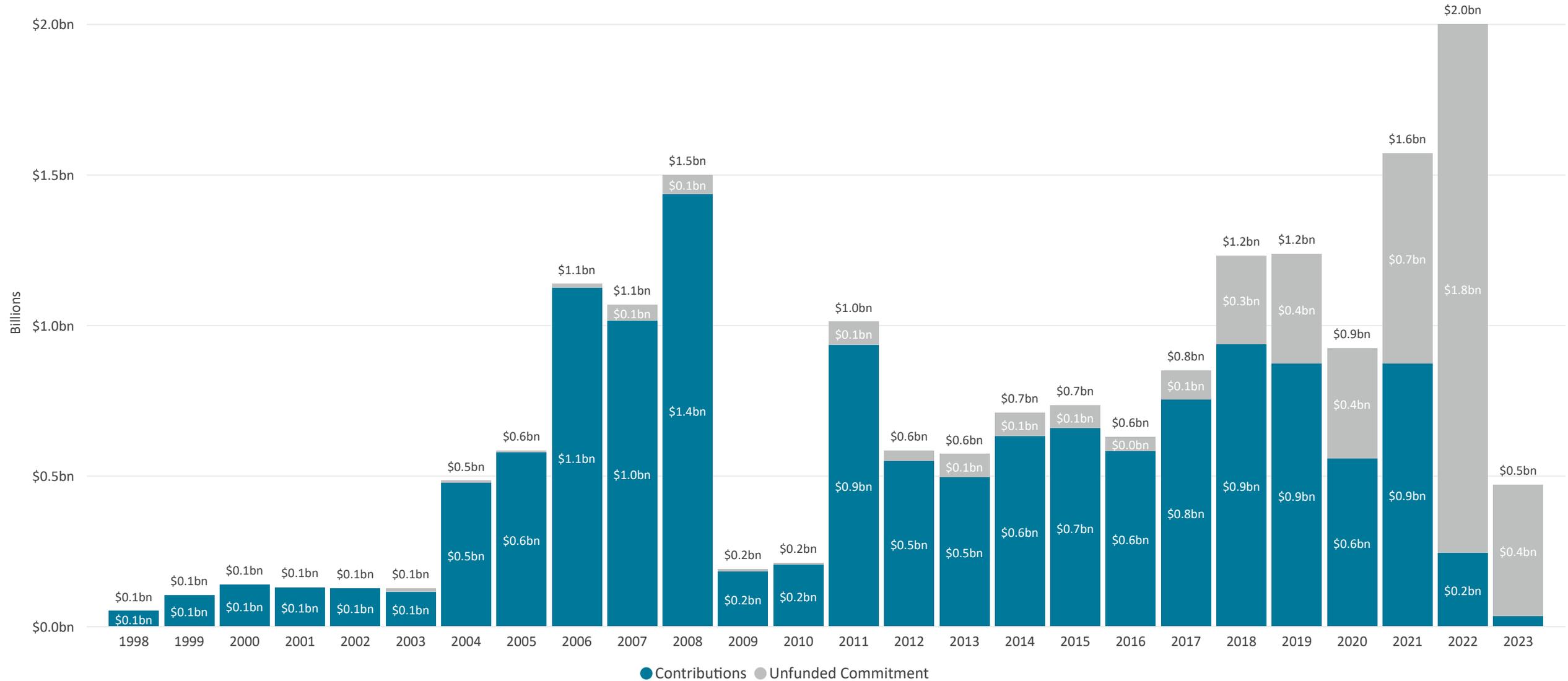
Portfolio Total Exposure by Investment Manager



INVESTED CAPITAL BY VINTAGE YEAR (%)

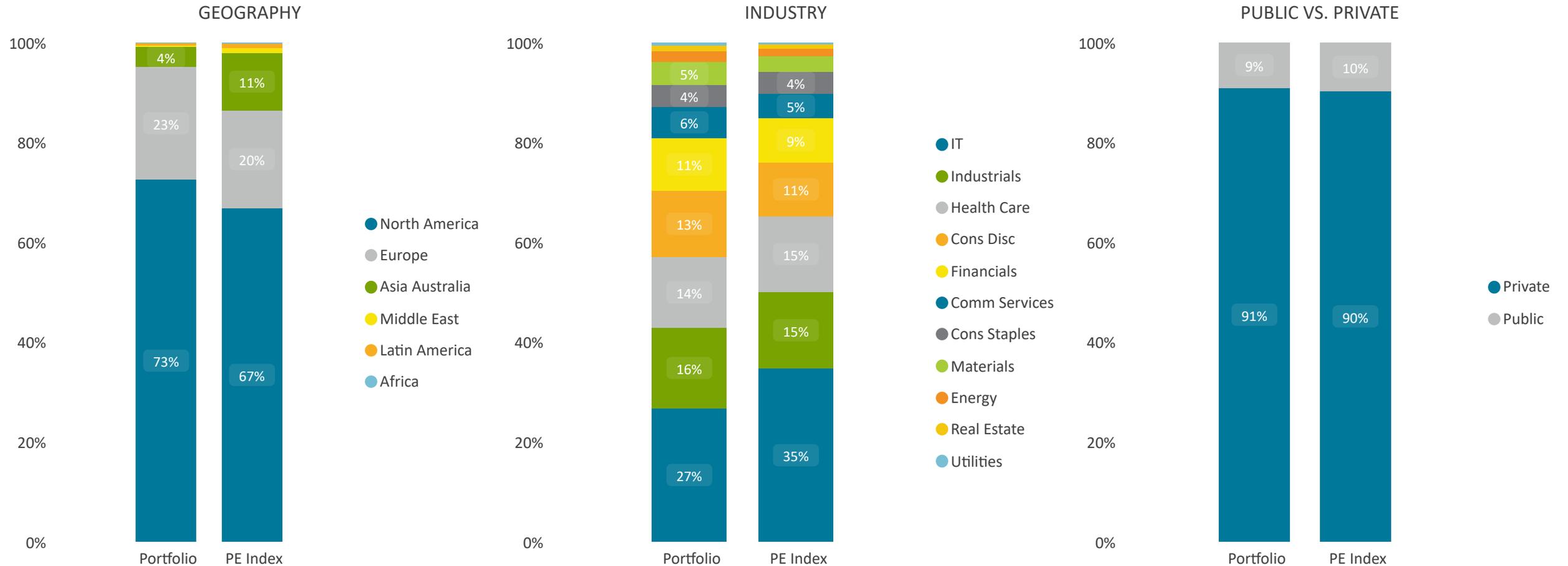


INVESTED CAPITAL BY VINTAGE YEAR (US\$)



PORTFOLIO COMPANY DIVERSIFICATION

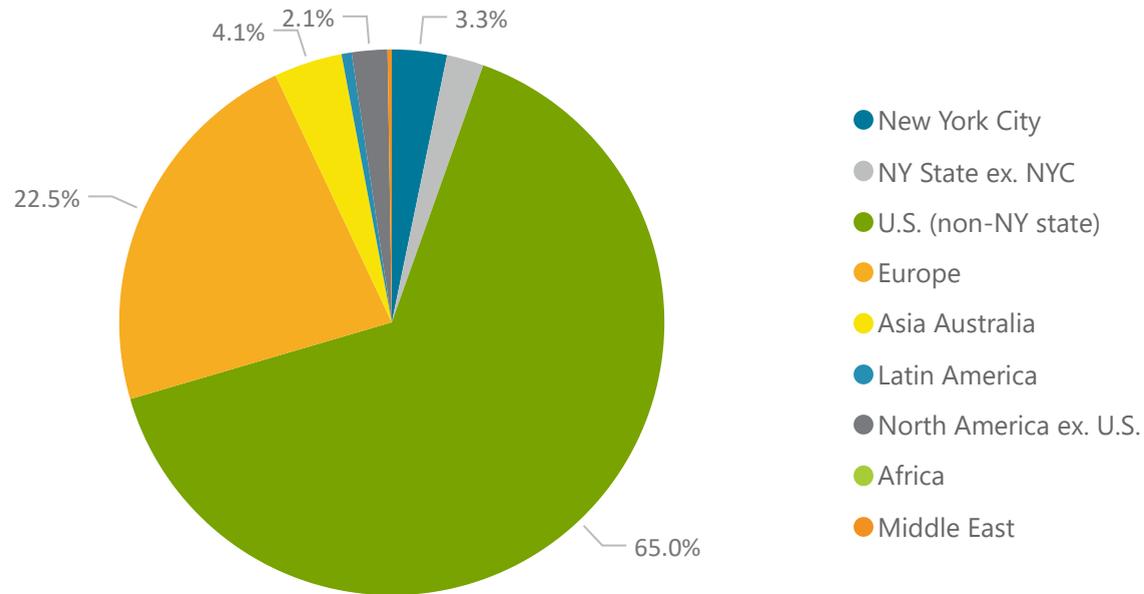
The following chart illustrates the portfolio's diversification by geography, industry (excluding funds-of-funds), and publicly traded vs. privately held assets based on Market Value at the portfolio company level as of March 31, 2023.



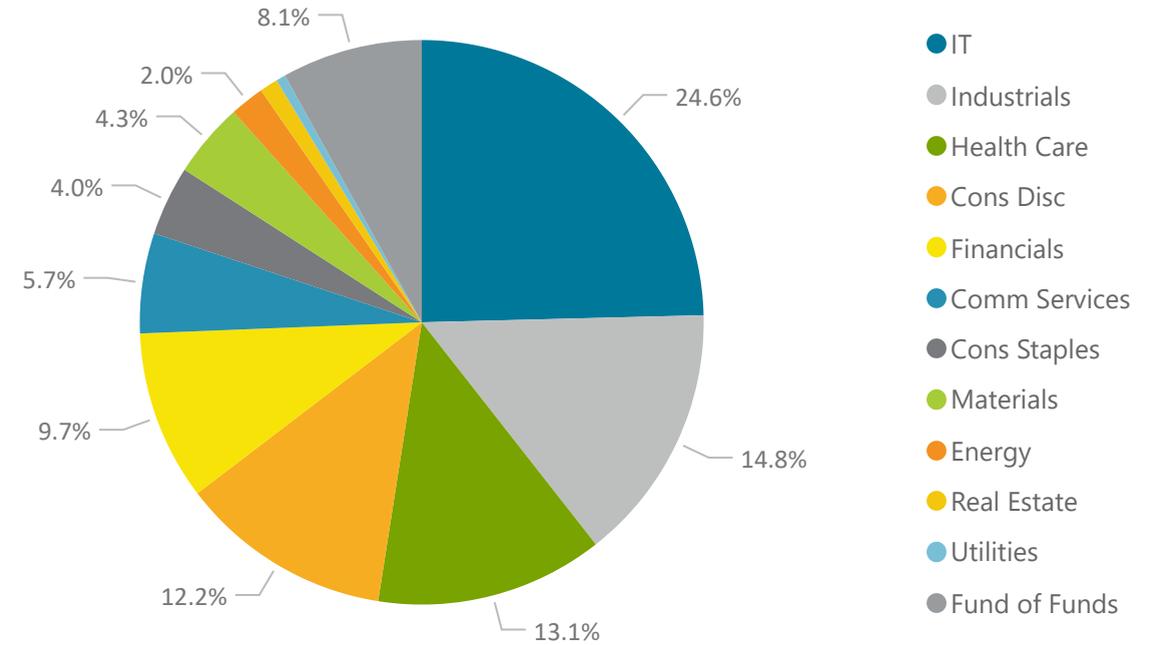
PE Index reflects total industry exposure of the StepStone Portfolio Analytics and Reporting ("SPAR") Asset Benchmark. SPAR data are continuously updated and subject to change.

PORTFOLIO COMPANY EXPOSURE

GEOGRAPHIC EXPOSURE BY CURRENT MARKET VALUE

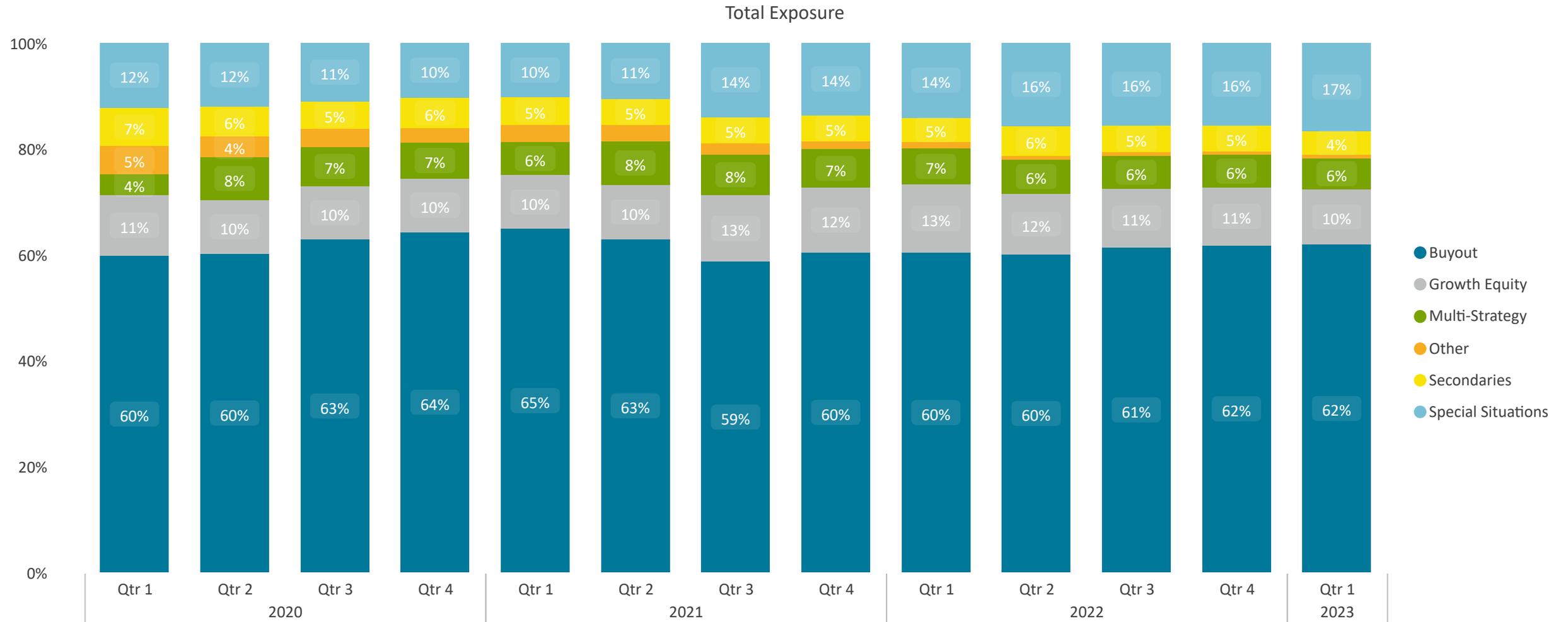


INDUSTRY EXPOSURE BY CURRENT MARKET VALUE

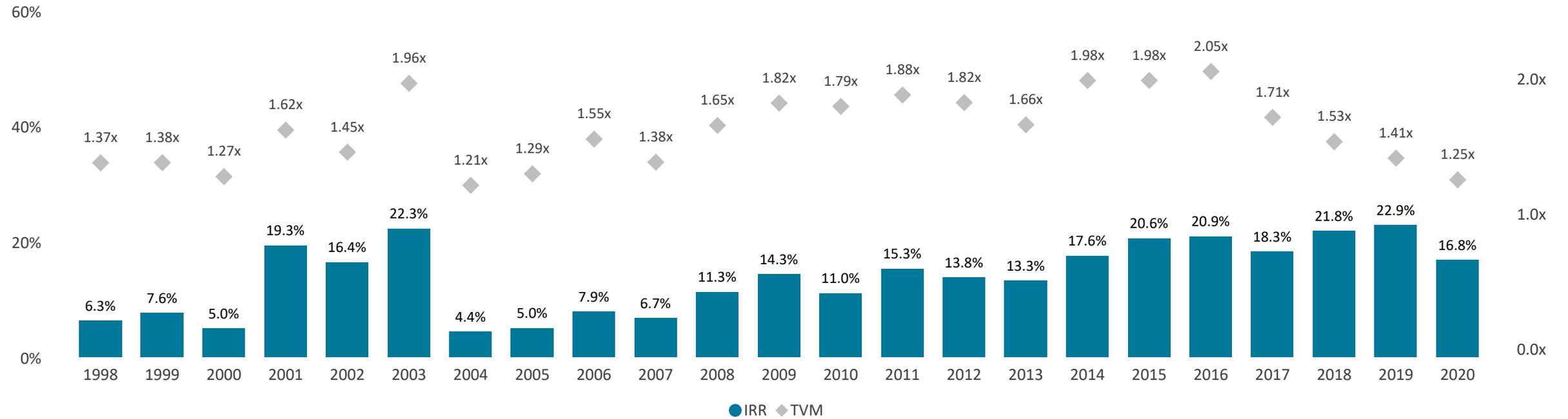


STRATEGY DIVERSIFICATION

The following chart illustrates the portfolio's diversification by strategy at the underlying investment level as of March 31, 2023.



PERFORMANCE BY VINTAGE YEAR

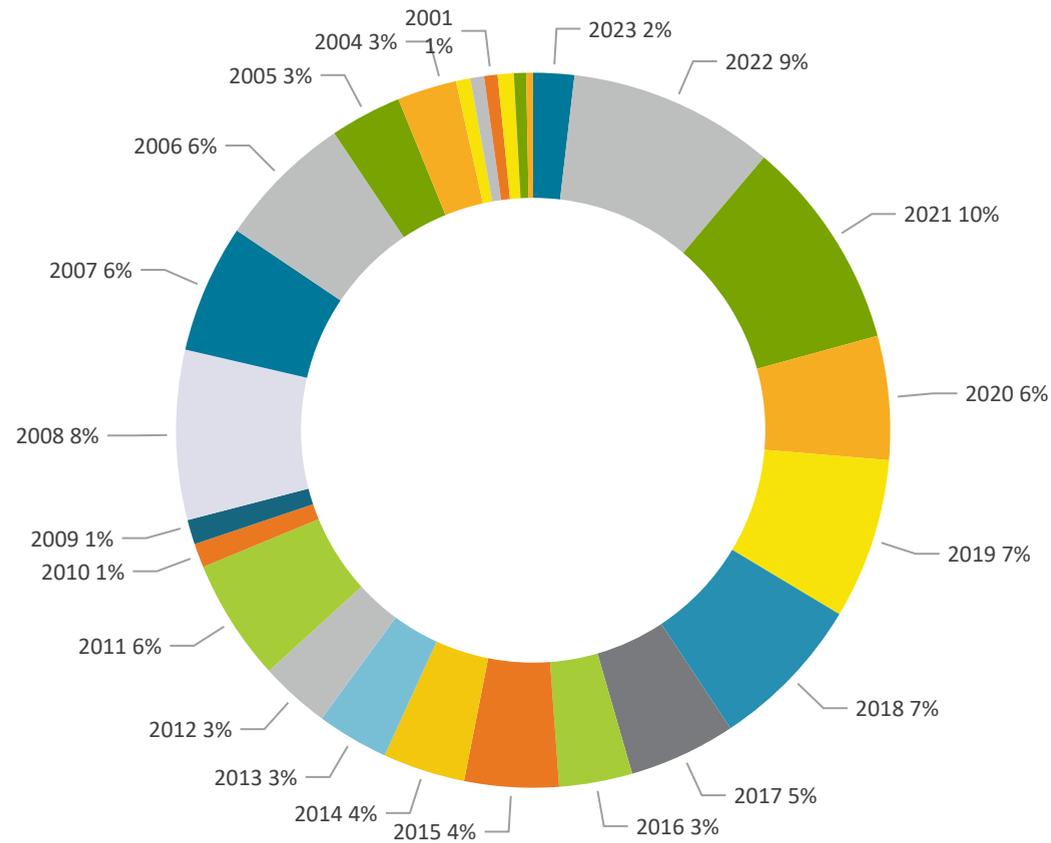


*Performance of funds with less than two years of activity is not considered meaningful.

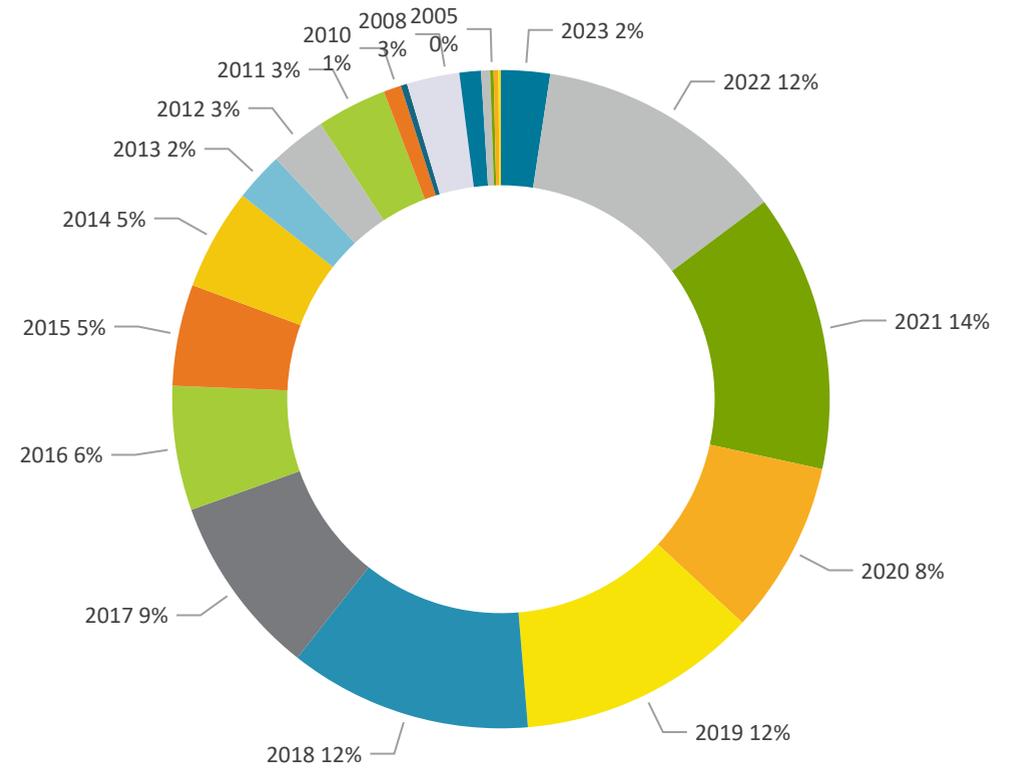
Unless otherwise indicated, all underlying investment attribution and performance information presented is net of fees and expenses charged by the underlying investment, but gross of StepStone vehicle/account fees and expenses. Where indicated, net return figures presented for StepStone vehicle/account performance include fees and expenses paid to StepStone.

VINTAGE YEAR DIVERSIFICATION

COMMITMENT



NAV + UNFUNDED



APPENDIX

New York City Employees' Retirement System
Private Equity Portfolio
As of March 31, 2023 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
Active Investments										
1999	Cypress Merchant Banking Partners II, L.P.	3/29/1999	\$ 45,172,972	\$ 53,944,269	\$ 50,584,154	\$ 18,474	0.94x	(1.2%)	5.5%	(6.7%)
1999	Lincolnshire Equity Fund II, L.P.	10/20/1999	18,397,347	19,261,466	37,755,344	70,457	1.96x	24.6%	6.9%	17.7%
2000	SCP Private Equity Partners II, L.P.	6/15/2000	27,442,463	30,827,225	10,819,873	667,027	0.37x	(12.8%)	5.3%	(17.9%)
2001	Apollo Investment Fund V, L.P.	4/13/2001	40,000,000	62,528,643	123,295,865	340,844	1.98x	38.6%	8.3%	30.3%
2003	FS Equity Partners V, L.P.	1/20/2003	25,000,000	21,466,945	42,223,402	1,412,090	2.03x	15.2%	5.0%	10.3%
2003	Blackstone Capital Partners IV, L.P.	2/26/2003	34,418,762	38,818,072	100,181,154	(58,067)	2.58x	39.7%	7.6%	32.2%
2003	Ares Corporate Opportunities Fund, L.P.	4/1/2003	45,000,000	53,984,770	80,476,920	54,178	1.49x	13.1%	7.4%	5.7%
2004	Markstone Capital Partners, LP	1/30/2004	40,000,000	46,899,103	19,822,611	272,215	0.43x	(29.0%)	10.3%	(39.3%)
2004	FdG Capital Partners II LP	8/30/2004	35,000,000	37,714,408	44,952,749	770,175	1.21x	3.7%	6.7%	(3.1%)
2004	Lincolnshire Equity Fund III, L.P.	10/1/2004	55,000,000	55,514,957	85,554,884	20,430,338	1.91x	27.6%	11.3%	16.3%
2004	Yucaipa American Alliance Fund I, LP	10/1/2004	90,000,000	114,094,892	137,148,067	227,580	1.20x	3.9%	10.5%	(6.7%)
2004	New York/Fairview Emerging Managers Fund, L.P.-Tranche 1	10/21/2004	32,000,000	32,862,069	35,029,553	480,451	1.08x	1.3%	8.7%	(7.4%)
2005	Palladium Equity Partners III, L.P.	11/12/2004	35,000,000	36,324,729	70,590,351	50,968	1.94x	16.1%	11.9%	4.2%
2005	Snow Phipps Group, L.P.	9/7/2005	20,000,000	24,505,430	22,347,815	9,124,090	1.28x	4.6%	11.1%	(6.5%)
2005	USPF II Institutional Fund, L.P.	11/23/2005	65,000,000	85,734,194	102,850,928	797,520	1.21x	3.3%	7.7%	(4.4%)
2005	JP Morgan Fleming (Tranche A)	12/21/2005	43,000,000	43,197,105	48,786,593	4,956,242	1.24x	3.9%	10.8%	(6.9%)
2006	Aisling Capital II, LP	1/12/2006	6,680,102	7,854,064	7,775,060	311,214	1.03x	0.5%	7.9%	(7.4%)
2006	BDCM Opportunity Fund II, L.P.	3/29/2006	25,000,000	37,203,442	102,225,390	2,180,500	2.81x	18.3%	11.7%	6.6%
2006	Blackstone Capital Partners V, L.P.	4/13/2006	121,624,827	129,565,095	212,264,044	1,085,229	1.65x	8.0%	8.4%	(0.4%)
2006	Apollo Investment Fund VI, L.P.	5/10/2006	90,000,000	115,838,240	173,338,314	1,620,482	1.51x	8.6%	7.6%	1.1%
2006	Ampersand 2006	8/14/2006	25,000,000	25,000,000	78,074,782	183,120	3.13x	16.9%	8.9%	8.0%
2006	Catterton Partners VI, L.P.	12/14/2006	45,000,000	51,243,868	88,601,068	10,841,451	1.94x	11.4%	9.1%	2.4%
2006	First Reserve Fund XI, L.P.	12/14/2006	45,000,000	47,820,682	30,880,319	42,470	0.65x	(9.8%)	7.1%	(16.8%)
2006	RRE Ventures IV, L.P.	12/19/2006	35,000,000	44,643,148	63,516,911	12,514,598	1.70x	6.3%	11.5%	(5.2%)
2006	MidOcean Partners III, L.P.	12/21/2006	58,234,777	69,977,561	156,029,637	111,288	2.23x	13.6%	10.0%	3.6%
2006	GF Capital Private Equity Fund, L.P.	12/22/2006	20,000,000	20,729,120	27,032,655	11,822,014	1.87x	11.5%	12.2%	(0.7%)
2006	The Fourth Civen Fund	1/22/2007	69,502,898	72,910,892	105,361,467	43,198	1.45x	7.4%	7.5%	(0.2%)
2007	Pegasus Partners IV, L.P.	1/29/2007	30,000,000	36,610,033	27,833,056	3,878,938	0.87x	(2.6%)	11.1%	(13.7%)
2007	FTVentures III, LP	3/1/2007	24,201,990	27,042,781	52,454,701	6,002,182	2.16x	15.4%	10.0%	5.4%
2007	Co-Investment Partners Europe, L.P.	3/19/2007	39,961,577	42,601,283	53,410,420	473,197	1.26x	4.5%	15.3%	(10.7%)
2007	Montreux Equity Partners V, L.P.	3/27/2007	20,000,000	20,000,000	11,044,696	14,937,283	1.30x	3.1%	9.9%	(6.8%)
2007	Quaker BioVentures II, L.P.	3/30/2007	20,000,000	19,358,740	21,298,246	231,607	1.11x	2.2%	12.6%	(10.3%)
2007	SCP Vitalife Partners II, L.P.	4/13/2007	20,000,000	20,099,698	1,579	3,694,568	0.18x	(13.4%)	(0.5%)	(12.9%)
2007	Nautic Partners VI, L.P.	5/14/2007	30,000,000	33,371,297	79,425,487	2,508,770	2.46x	18.6%	12.0%	6.6%
2007	United States Power Fund III, L.P.	6/28/2007	65,000,000	76,903,642	98,623,277	1,937,796	1.31x	4.4%	9.9%	(5.6%)
2007	Halyard Capital Fund II, L.P.	7/2/2007	25,000,000	21,834,806	26,860,530	6,797,073	1.54x	7.0%	9.9%	(3.0%)
2007	Carlyle Partners V, L.P.	7/6/2007	70,000,000	72,385,953	129,350,257	3,451,913	1.83x	13.7%	11.0%	2.7%
2007	PCG Clean Energy & Technology Fund (East), LLC	7/6/2007	90,000,000	81,429,594	25,147,244	9,122,697	0.42x	(9.7%)	12.8%	(22.5%)
2007	GSO Capital Opportunities Fund LP	7/16/2007	45,000,000	67,377,298	95,627,284	902,557	1.43x	17.3%	10.1%	7.2%
2007	StarVest Partners II, L.P.	8/1/2007	25,000,000	25,159,680	12,838,046	6,510,810	0.77x	(3.2%)	13.6%	(16.7%)
2007	New Mountain Partners III, L.P.	8/9/2007	100,000,000	105,895,297	251,795,557	4,198,426	2.42x	14.6%	13.2%	1.4%
2007	Vista Equity Partners Fund III, L.P.	10/3/2007	30,000,000	32,289,780	76,639,447	3,498,361	2.48x	26.8%	9.9%	17.0%
2007	Trilantic Capital Partners IV L.P.	10/22/2007	69,028,637	70,369,187	107,068,779	3,836,668	1.58x	13.2%	11.0%	2.2%
2007	RLI Equity Partners Fund I, L.P.	11/30/2007	20,000,000	22,207,371	25,717,006	2,171,310	1.26x	5.2%	13.9%	(8.7%)
2007	Pine Brook Capital Partners, L.P.	1/11/2008	30,000,000	34,099,838	44,696,771	2,122,723	1.37x	7.8%	12.1%	(4.2%)
2008	Paladin III (NY City), L.P.	1/8/2008	30,000,000	42,398,853	85,435,293	11,510,460	2.29x	13.2%	12.2%	1.1%
2008	Apollo Investment Fund VII, L.P.	1/28/2008	100,000,000	122,641,575	212,950,729	1,130,104	1.75x	22.6%	13.8%	8.8%
2008	NGN BioMed Opportunity III, L.P.	2/11/2008	20,000,000	19,151,821	15,346,209	9,591,800	1.30x	3.2%	14.6%	(11.4%)
2008	Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	3/3/2008	45,000,000	51,842,597	56,048,355	18,343	1.08x	2.1%	13.9%	(11.9%)
2008	Yucaipa American Alliance Fund II, LP	3/28/2008	120,000,000	164,699,094	179,267,760	97,909,067	1.68x	8.0%	12.2%	(4.2%)
2008	Levine Leichtman Capital Partners IV, L.P.	4/8/2008	35,000,000	37,477,097	59,355,428	3,315,085	1.67x	17.8%	14.2%	3.6%
2008	New York/Fairview Emerging Managers Fund, L.P.-Tranche 2	5/28/2008	45,000,000	45,593,762	98,544,993	21,688,967	2.64x	17.5%	13.0%	4.5%
2008	Yucaipa Corporate Initiatives Fund II, LP	6/23/2008	42,092,788	41,334,383	36,643,956	594,792	0.90x	(1.4%)	12.3%	(13.7%)
2008	Leeds Equity Partners V, L.P.	7/28/2008	60,000,000	55,563,349	138,084,684	6,111,877	2.60x	18.5%	13.9%	4.6%
2008	GI Partners Fund III L.P.	7/29/2008	45,000,000	48,627,007	76,237,582	21,186	1.57x	13.0%	15.3%	(2.4%)
2008	Ares Corporate Opportunities Fund III, L.P.	7/30/2008	75,000,000	91,895,841	194,522,102	748,357	2.12x	20.2%	12.1%	8.1%
2008	GCM Grosvenor NYCERS Emerging Manager Fund, L.P.	8/22/2008	116,737,374	148,678,953	179,943,518	49,114,703	1.54x	9.9%	13.3%	(3.4%)
2008	First Reserve Fund XII, L.P.	8/25/2008	45,000,000	49,986,866	26,002,530	54,888	0.52x	(17.9%)	17.1%	(35.0%)
2008	Landmark Equity Partners XIV, L.P.	9/19/2008	109,120,000	106,576,780	135,145,577	7,686,493	1.34x	9.4%	14.4%	(5.1%)
2008	Crestview Partners II, L.P.	10/1/2008	50,000,000	61,003,893	95,855,897	21,822,268	1.93x	13.9%	14.2%	(0.3%)
2008	Avista Capital Partners II, L.P.	11/5/2008	75,000,000	98,854,483	158,932,589	3,360,823	1.64x	14.4%	14.7%	(0.3%)
2008	Blue Wolf Capital Fund II, L.P.	11/14/2008	25,000,000	27,497,673	46,459,204	143,634	1.69x	10.7%	15.4%	(4.6%)
2008	Bridgepoint Europe IV	11/14/2008	26,647,304	27,310,693	37,228,532	4,599,957	1.53x	9.5%	14.7%	(5.2%)
2008	Aisling Capital III, LP	11/20/2008	14,000,000	15,795,192	37,253,299	86,843	2.36x	26.0%	14.3%	11.7%
2008	Onex Partners III LP	12/10/2008	75,000,000	82,261,325	123,329,468	12,794,794	1.65x	11.4%	15.0%	(3.6%)
2009	Welsh, Carson, Anderson & Stowe XI, L.P.	2/10/2009	40,000,000	39,725,634	64,273,518	2,770,516	1.69x	11.7%	15.0%	(3.3%)
2009	FS Equity Partners VI, L.P.	7/27/2009	32,500,000	32,795,595	92,678,267	14,407,303	3.27x	23.7%	14.5%	9.2%
2009	Lincolnshire Equity Fund IV, L.P.	8/5/2009	27,500,000	29,739,521	35,548,777	7,128,129	1.44x	8.0%	13.4%	(5.4%)
2009	Lexington Capital Partners VII, L.P.	12/3/2009	50,000,000	44,798,718	68,011,360	6,048,574	1.65x	13.8%	14.3%	(0.4%)
2010	Snow Phipps II, L.P.	1/8/2010	30,000,000	36,535,241	32,618,121	16,481,780	1.34x	7.1%	13.2%	(6.2%)
2010	JP Morgan Fleming (Tranche B)	2/26/2010	35,000,000	37,098,692	50,436,431	16,696,182	1.81x	10.2%	13.1%	(2.9%)
2010	Trident V, L.P.	4/29/2010	110,000,000	130,161,068	182,554,873	66,471,819	1.91x	12.0%	12.4%	(0.4%)
2011	Blackstone Capital Partners VI, L.P.	1/24/2011	120,000,000	128,973,407	182,426,371	48,941,556	1.79x	12.4%	12.5%	(0.0%)
2011	Ampersand 2011	3/11/2011	25,000,000	25,000,000	80,968,121	197,202	3.25x	21.8%	13.0%	8.8%
2011	BDCM Opportunity Fund III, L.P.	4/8/2011	45,000,000	67,166,680	61,547,581	71,065,492	1.97x	11.5%	11.9%	(0.4%)
2011	AXA Secondary Fund V B L.P.	6/16/2011	120,000,000	98,870,221	158,462,629	330,858	1.61x	15.4%	14.8%	0.7%
2011	Wellspring Capital Partners V, L.P.	7/1/2011	40,000,000	42,518,070	60,587,611	12,823,528	1.73x	15.4%	12.0%	3.4%
2011	EQT VI, L.P.	8/1/2011	106,649,521	113,483,799	198,017,818	125,741	1.75x	13.6%	13.0%	0.6%

New York City Employees' Retirement System
Private Equity Portfolio
As of March 31, 2023 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
2011	Pegasus Partners V, L.P.	8/16/2011	\$ 20,789,916	\$ 26,784,961	\$ 22,725,995	\$ 11,953,788	1.29x	5.7%	14.1%	(8.3%)
2011	BC European Capital IX	9/19/2011	128,915,739	150,050,514	181,757,621	55,992,270	1.58x	10.6%	13.3%	(2.7%)
2011	American Securities Partners VI, L.P.	11/18/2011	80,000,000	89,723,167	156,946,161	47,572,197	2.28x	21.9%	12.9%	8.9%
2011	Vista Equity Partners Fund IV, L.P.	11/30/2011	100,000,000	105,896,862	133,593,497	76,514,683	1.98x	14.8%	13.0%	1.9%
2012	Warburg Pincus Private Equity XI, L.P.	5/24/2012	110,000,000	116,079,667	151,762,922	46,941,868	1.71x	12.1%	12.6%	(0.5%)
2012	Trilantic Capital Partners V L.P.	9/20/2012	70,000,000	76,577,965	105,015,887	23,624,375	1.68x	15.6%	12.3%	3.3%
2012	Palladium Equity Partners IV, L.P.	10/10/2012	55,000,000	56,388,180	39,692,985	51,927,955	1.62x	10.4%	12.4%	(2.1%)
2012	Ares Corporate Opportunities Fund IV, L.P.	11/5/2012	125,000,000	133,438,399	207,683,200	43,766,586	1.88x	14.7%	11.8%	2.9%
2012	Green Equity Investors VI, L.P.	11/30/2012	120,000,000	134,456,598	141,617,120	128,211,151	2.01x	14.1%	12.2%	1.9%
2011	Platinum Equity Capital Partners III, L.P.	1/14/2013	100,000,000	85,742,346	172,090,805	18,613,623	2.22x	35.8%	13.0%	22.8%
2012	NYCERS - 2012 Emerging Manager Program ⁴	6/21/2013	128,600,000	135,092,726	237,489,076	76,928,069	2.33x	20.2%	12.5%	7.8%
2013	Carlyle Partners VI, L.P.	7/3/2013	75,000,000	81,580,353	120,584,525	34,921,211	1.91x	15.1%	12.8%	2.3%
2014	Carlyle Partners VI, L.P. (Side Car)	9/23/2014	6,433,000	4,193,607	7,620,214	4,360,665	1.99x	12.3%	13.3%	(1.0%)
2013	Landmark Equity Partners XV, L.P.	10/30/2013	75,000,000	60,205,101	69,719,830	15,912,270	1.42x	11.9%	12.0%	(0.1%)
2013	Apollo Investment Fund VIII, L.P.	12/11/2013	140,000,000	136,742,956	151,350,814	52,082,937	1.49x	10.0%	13.2%	(3.2%)
2013	Landmark - NYC Fund I, L.P.	12/24/2013	25,000,000	22,906,426	27,324,075	13,171,632	1.77x	15.6%	10.8%	4.8%
2014	CVC Capital Partners VI, L.P.	2/18/2014	123,783,391	134,641,080	148,043,129	124,441,264	2.02x	17.1%	11.8%	5.2%
2013	Crestview Partners III, L.P.	3/3/2015	66,000,000	61,534,730	37,131,373	56,574,044	1.52x	11.9%	11.2%	0.7%
2014	Crestview Partners III (Co-Investment B), L.P.	12/17/2015	22,000,000	22,781,960	1,085,940	26,949,384	1.23x	3.8%	11.9%	(8.2%)
2014	Olympus Growth Fund VII, L.P.	1/21/2014	75,000,000	76,148,005	81,055,802	62,219,183	1.88x	16.7%	12.2%	4.5%
2013	ASF VI B L.P.	5/9/2014	83,000,000	68,580,939	88,632,902	12,073,264	1.47x	12.2%	12.1%	0.2%
2014	ASF VI B NYC Co-Invest L.P.	5/9/2014	27,000,000	23,193,845	28,582,470	6,402,957	1.51x	12.4%	9.7%	2.7%
2014	Vista Equity Partners Fund V, L.P.	9/8/2014	125,000,000	156,535,815	183,219,234	166,145,896	2.33x	19.5%	11.2%	8.4%
2014	Lexington Capital Partners VIII, L.P.	1/8/2015	110,000,000	100,053,347	99,325,644	67,593,214	1.67x	16.7%	12.1%	4.7%
2015	Siris Partners III, L.P.	5/4/2015	31,000,000	32,981,149	24,999,371	23,944,126	1.48x	11.8%	12.0%	(0.2%)
2015	Centerbridge Capital Partners III, L.P.	5/21/2015	23,700,000	31,240,076	29,642,076	23,073,849	1.69x	18.6%	11.2%	7.4%
2015	Welsh, Carson, Anderson & Stowe XII, L.P.	8/26/2015	78,500,000	75,234,053	110,330,753	73,835,313	2.45x	27.0%	12.0%	15.0%
2015	Warburg Pincus Private Equity XII, L.P.	12/21/2015	205,500,000	205,861,417	217,866,288	198,582,509	2.02x	18.1%	11.8%	6.3%
2015	ASF VII B L.P.	12/29/2015	94,500,000	63,436,379	48,558,770	55,432,078	1.64x	16.8%	12.9%	3.9%
2015	ASF VII B NYC Co-Invest L.P.	12/29/2015	46,000,000	32,254,963	30,777,451	26,236,604	1.77x	18.9%	10.8%	8.2%
2015	EQT VII, L.P.	1/8/2016	163,012,338	175,221,617	257,047,636	91,885,675	1.99x	22.5%	13.1%	9.3%
2016	American Securities Partners VII, L.P.	1/19/2016	80,000,000	78,370,470	41,244,236	109,071,133	1.92x	16.1%	11.9%	4.3%
2014	Bridgepoint Europe V L.P.	2/8/2016	61,649,451	59,321,085	81,111,250	34,862,815	1.96x	18.5%	13.8%	4.7%
2015	Bridgepoint Europe V Co-Invest	8/16/2016	18,277,124	16,788,035	34,908,186	10,319,701	2.69x	27.1%	10.9%	16.2%
2015	NYCERS - 2015 Emerging Manager Program ⁵	2/22/2016	158,750,000	155,638,292	62,358,313	221,346,878	1.82x	22.1%	9.7%	12.4%
2016	Vista Equity Partners Fund VI, L.P.	6/28/2016	158,000,000	197,141,297	165,699,170	239,735,340	2.06x	19.6%	11.6%	8.0%
2016	Platinum Equity Capital Partners IV, L.P.	3/21/2017	111,000,000	109,371,068	102,772,053	126,635,609	2.10x	25.0%	11.1%	13.9%
2018	Platinum Equity Capital Partners IV Co-Investment, L.P.	9/7/2018	16,000,000	11,221,788	2,232,710	13,873,565	1.44x	9.2%	8.4%	0.8%
2016	Apax IX USD, L.P.	5/12/2017	127,000,000	136,992,171	153,113,447	123,609,245	2.02x	23.2%	12.1%	11.2%
2017	Green Equity Investors VII, L.P.	5/12/2017	95,000,000	90,827,780	75,011,809	117,882,200	2.12x	22.6%	11.2%	11.4%
2017	Ares Corporate Opportunities Fund V, L.P.	6/22/2017	95,000,000	102,874,763	47,157,001	91,875,871	1.35x	9.6%	11.4%	(1.8%)
2017	KKR Americas Fund XII, L.P.	10/31/2017	158,000,000	152,383,176	67,627,703	195,685,915	1.73x	20.4%	8.3%	12.1%
2017	BC European Capital X	12/14/2017	88,810,613	84,248,362	15,089,631	109,096,082	1.47x	10.6%	10.3%	0.3%
2016	BCEC X Co-Investment	3/24/2017	35,738,985	35,955,034	11,728,643	55,142,227	1.86x	15.7%	10.4%	5.3%
2017	Warburg Pincus Financial Sector, L.P.	1/5/2018	104,000,000	104,662,019	40,072,523	149,485,981	1.81x	21.6%	9.7%	11.9%
2018	Platinum Equity Small Cap Fund, L.P.	6/27/2018	41,000,000	29,703,062	6,703,129	50,783,626	1.94x	30.4%	4.3%	26.1%
2018	EQT VIII, L.P.	8/10/2018	110,615,812	108,809,584	76,227,227	119,384,341	1.80x	26.9%	11.7%	15.2%
2018	EQT VIII Co-Investment	11/2/2018	39,513,017	37,570,673	48,645,225	29,644,611	2.08x	37.5%	8.5%	29.0%
2017	CVC Capital Partners VII, L.P.	12/4/2018	153,172,831	149,749,470	39,030,587	220,403,648	1.73x	23.3%	7.4%	15.9%
2017	Palladium Equity Partners V, L.P.	2/11/2019	33,333,333	21,246,869	5,797,008	22,136,052	1.31x	10.3%	11.8%	(1.5%)
2018	Vista Equity Partners Fund VII, L.P.	2/13/2019	177,500,000	159,502,435	16,938,741	185,962,575	1.27x	10.7%	7.8%	3.0%
2019	Welsh, Carson, Anderson & Stowe XIII, L.P.	3/14/2019	89,000,000	73,781,393	29,581,527	75,296,981	1.42x	26.1%	4.5%	21.6%
2018	Siris Partners IV, L.P.	3/15/2019	89,000,000	79,900,542	10,591,551	105,217,727	1.57x	18.8%	7.9%	10.9%
2018	Apollo Investment Fund IX, L.P.	3/15/2019	256,000,000	221,767,480	79,022,677	246,109,613	1.47x	25.0%	5.4%	19.6%
2018	ASF VIII B L.P.	3/15/2019	174,000,000	91,840,081	22,413,813	115,458,658	1.50x	25.3%	9.9%	15.5%
2019	ASF VIII B NYC Co-Invest L.P.	3/15/2019	87,000,000	36,782,599	7,604,238	50,705,312	1.59x	39.3%	4.9%	34.4%
2019	Warburg Pincus Global Growth, L.P.	3/26/2019	125,500,000	109,863,978	909,875	151,306,599	1.39x	15.1%	5.0%	10.0%
2018	Bridgepoint Europe VI	4/1/2019	119,715,570	100,240,974	10,401,977	144,755,201	1.55x	23.0%	8.5%	14.6%
2019	Bridgepoint Europe VI Co-Invest	5/7/2019	30,183,911	23,006,044	-	36,944,028	1.61x	19.9%	9.6%	10.3%
2019	Trilantic Capital Partners VI (North America) L.P.	8/8/2019	51,000,000	43,792,614	4,577,339	59,005,538	1.45x	21.7%	3.7%	18.0%
2019	NYCERS - 2019 Emerging Manager Program ⁶	9/25/2019	247,650,000	70,290,941	6,968,416	110,346,175	1.67x	26.7%	7.9%	18.8%
2019	Lexington Capital Partners IX	12/20/2019	106,500,000	84,955,734	22,956,932	102,770,222	1.48x	30.9%	3.7%	27.2%
2019	Lexington IX Co-Invest	9/29/2020	35,500,000	17,396,775	7,118,591	22,321,153	1.69x	37.9%	1.1%	36.8%
2019	Platinum Equity Capital Partners V, L.P.	12/27/2019	157,000,000	160,340,959	25,019,785	212,190,748	1.48x	25.4%	(0.1%)	25.5%
2021	Platinum Equity Capital Partners V Co-Investment, L.P.	7/1/2021	39,250,000	38,725,935	5,948,477	72,334,431	2.02x	NM	NM	N/A
2019	KKR European Fund V (USD)	1/15/2020	83,250,000	71,986,402	13,901,011	71,478,855	1.19x	9.5%	6.6%	2.9%
2020	FTV VI	3/18/2020	21,500,000	21,107,141	2,469,461	33,592,131	1.71x	31.0%	5.1%	25.9%
2019	Lindsay Goldberg V	4/29/2020	87,000,000	43,350,480	11,868,636	47,791,140	1.38x	26.4%	4.4%	22.1%
2019	Blackstone Capital Partners VIII L.P.	5/19/2020	109,000,000	61,878,851	3,627,902	68,085,456	1.16x	12.5%	(2.3%)	14.8%
2020	Clearlake Capital Partners VI, L.P.	5/22/2020	47,000,000	47,558,076	3,936,896	70,690,208	1.57x	28.9%	2.4%	26.6%
2020	Green Equity Investors VIII, L.P.	10/19/2020	109,000,000	94,993,136	883,114	107,666,004	1.14x	8.8%	(2.0%)	10.8%
2020	Green Equity Investors VIII Coinvest N, L.P.	5/20/2020	36,300,000	25,994,288	-	30,987,067	1.19x	9.6%	1.9%	7.7%
2019	Crestview Partners IV, L.P.	10/28/2020	71,000,000	40,092,644	11,509,869	48,554,202	1.50x	41.4%	1.0%	40.4%
2019	Crestview Partners IV (Co-Investment), L.P.	10/28/2020	23,666,667	13,364,217	4,431,920	18,317,849	1.70x	57.0%	1.8%	55.1%
2019	Apax X USD L.P.	11/10/2020	104,500,000	84,100,633	6,573,550	97,393,794	1.24x	19.8%	0.5%	19.3%
2020	Valor Equity Partners V, L.P.	1/28/2021	26,000,000	21,750,276	62,582	29,798,723	1.37x	20.4%	0.3%	20.1%
2020	EQT IX (No. 2) USD SCSF	2/5/2021	92,125,000	90,431,412	8,940,931	98,663,382	1.19x	14.0%	(2.3%)	16.3%
2020	EQT IX Co-Investment	4/12/2021	25,125,000	24,945,834	418,937	25,701,341	1.05x	NM	NM	N/A

New York City Employees' Retirement System
Private Equity Portfolio
As of March 31, 2023 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
2020	Hg Genesis 9, L.P.	3/2/2021	\$ 50,049,361	\$ 40,644,636	\$ 8,430,447	\$ 38,918,070	1.16x	16.7%	(3.8%)	20.5%
2020	BC Partners Fund XI	7/30/2021	110,000,000	47,597,945	269,657	50,557,809	1.07x	NM	NM	N/A
2021	BC Partners XI Metro Co-Investment L.P.	4/13/2021	50,000,000	32,456,507	-	37,538,200	1.16x	NM	NM	N/A
2021	Grain Communications Opportunity Fund III, L.P.	4/30/2021	21,000,000	13,330,770	50,777	12,247,651	0.92x	NM	NM	N/A
2020	KKR Asian Fund IV SCSp	5/27/2021	103,000,000	37,259,077	285,312	36,944,646	1.00x	NM	NM	N/A
2020	NYC-NorthBound Emerging Managers Program LP	5/5/2021	262,000,000	88,147,121	1,502,544	122,397,106	1.41x	NM	NM	N/A
2021	One Rock Capital Partners III, L.P.	6/1/2021	43,000,000	31,972,622	4,401,917	36,630,764	1.28x	NM	NM	N/A
2021	Stellex Capital Partners II	4/2/2021	51,500,000	31,833,756	1,935,916	32,385,807	1.08x	NM	NM	N/A
2021	Warburg Pincus Financial Sector II, L.P.	7/26/2021	84,500,000	32,668,510	-	42,120,630	1.29x	NM	NM	N/A
2021	Harbourvest Centre Street Co-Investment Fund L.P.	8/12/2021	172,000,000	92,220,673	-	91,678,726	0.99x	NM	NM	N/A
2021	Insight Partners XII Buyout Annex Fund, L.P.	8/25/2021	32,000,000	20,320,000	-	18,534,812	0.91x	NM	NM	N/A
2021	Insight Partners XII	8/27/2021	96,000,000	66,676,775	106,087	57,390,095	0.86x	NM	NM	N/A
2021	The Resolute Fund V, L.P.	9/7/2021	72,000,000	60,076,958	624,252	89,623,376	1.50x	NM	NM	N/A
2021	Ares Corporate Opportunities Fund VI, L.P.	10/13/2021	100,000,000	87,924,467	19,407,688	78,906,207	1.12x	NM	NM	N/A
2021	Ares Corporate Opportunities Fund VI Co-Invest	9/23/2022	60,000,000	40,731,784	-	42,278,810	1.04x	NM	NM	N/A
2021	Vistria Fund IV, L.P.	10/14/2021	48,000,000	35,441,882	676,551	36,418,026	1.05x	NM	NM	N/A
2021	Centerbridge Capital Partners IV Co-Invest	10/28/2021	32,000,000	24,318,705	1,453,696	34,196,043	1.47x	NM	NM	N/A
2021	Centerbridge Capital Partners IV, L.P.	12/6/2021	64,000,000	27,377,998	-	42,656,445	1.56x	NM	NM	N/A
2021	CVC Capital Partners VIII, L.P.	12/14/2021	166,751,459	95,728,287	556,941	102,786,364	1.08x	NM	NM	N/A
2022	FTV VII	1/14/2022	59,579,960	22,640,385	-	22,335,368	0.99x	NM	NM	N/A
2022	FTV VII Co-Invest	3/21/2022	13,405,490	3,924,570	-	3,919,392	1.00x	NM	NM	N/A
2022	TPG Rise Climate Co-Invest, L.P.	3/2/2022	91,666,667	23,009,262	-	32,714,297	1.42x	NM	NM	N/A
2022	TPG Rise Climate, L.P.	6/14/2022	45,833,333	12,379,134	235,530	14,393,325	1.18x	NM	NM	N/A
2021	Clearlake Capital Partners VII, L.P.	4/26/2022	144,000,000	73,977,761	3,505	76,644,538	1.04x	NM	NM	N/A
2021	KKR North America Fund XIII, L.P.	5/5/2022	160,000,000	53,622,162	-	49,431,295	0.92x	NM	NM	N/A
2021	Reverence Capital Partners V (PE Fund III), L.P.	6/7/2022	42,000,000	9,422,798	68,352	8,567,945	0.92x	NM	NM	N/A
2021	Reverence III Side Car	6/7/2022	15,000,000	3,069,571	24,412	3,069,249	1.01x	NM	NM	N/A
2022	Thoma Bravo XV	6/10/2022	123,000,000	66,013,633	26,652	65,634,982	0.99x	NM	NM	N/A
2022	Thoma Bravo XV Co-Invest	6/10/2022	41,000,000	21,464,289	-	20,966,585	0.98x	NM	NM	N/A
2022	Lexington Capital Partners X Co-Invest	6/29/2022	32,000,000	6,309,556	-	7,680,621	1.22x	NM	NM	N/A
2022	Lexington Capital Partners X	N/A	96,000,000	-	-	3,173,912	-	NM	NM	N/A
2022	Hg NYC Co-Invest	6/30/2022	24,600,000	8,067,936	-	8,988,706	1.11x	NM	NM	N/A
2022	Hg Saturn 3	7/5/2022	49,200,000	494,696	-	1,095,442	2.21x	NM	NM	N/A
2022	Hg Genesis 10	9/23/2022	69,975,648	896,931	-	832,899	0.93x	NM	NM	N/A
2022	Warburg Pincus Global Growth XIV, L.P.	7/28/2022	94,040,000	18,967,739	-	18,422,803	0.97x	NM	NM	N/A
2022	Warburg Pincus Global Growth XIV Co-Invest	7/28/2022	56,420,000	5,704,932	-	5,591,342	0.98x	NM	NM	N/A
2021	Apax Digital Fund II, L.P.	11/10/2022	45,000,000	1,605,372	-	335,156	0.21x	NM	NM	N/A
2022	EQT X	12/2/2022	111,000,000	1,856,288	1,856,288	(978,471)	0.47x	NM	NM	N/A
2022	EQT X Co-Invest	12/9/2022	37,000,000	6,735,990	-	6,701,225	0.99x	NM	NM	N/A
2022	Platinum Equity Capital Partners VI, L.P.	12/12/2022	156,000,000	10,393,978	-	8,198,983	0.79x	NM	NM	N/A
2022	Platinum Equity Capital Partners VI Co-Invest	N/A	52,000,000	-	-	-	-	NM	NM	N/A
2022	Welsh, Carson, Anderson & Stowe XIV, L.P.	12/27/2022	96,000,000	8,682,807	-	5,690,739	0.66x	NM	NM	N/A
2022	Welsh, Carson, Anderson & Stowe XIV, L.P. Side Car	N/A	32,000,000	-	-	-	-	NM	NM	N/A
2022	Permira VIII	3/30/2023	139,341,526	21,275,411	-	20,428,629	0.96x	NM	NM	N/A
2023	Vista Equity Partners Fund VIII, L.P.	3/28/2023	123,000,000	16,580,713	-	14,607,088	0.88x	NM	NM	N/A
2023	Vista Co-Invest Fund 2022-4, L.P.	3/31/2023	41,000,000	8,477,137	-	8,477,514	1.00x	NM	NM	N/A
2023	Valor Equity Partners VI, L.P.	3/31/2023	52,000,000	9,027,786	-	7,812,299	0.87x	NM	NM	N/A
2022	Green Equity Investors IX, L.P.	N/A	120,000,000	-	-	(213,979)	-	NM	NM	N/A
2022	Green Equity Investors IX Co-Invest	N/A	40,000,000	-	-	-	-	NM	NM	N/A
2022	Raine Partners IV	N/A	32,000,000	-	-	(919,912)	-	NM	NM	N/A
2022	Nordic Capital XI	N/A	89,113,484	-	-	(957,876)	-	NM	NM	N/A
2022	Nordic Capital XI Co-Invest	N/A	39,209,933	-	-	-	-	NM	NM	N/A
2022	Apax XI	N/A	131,000,000	-	-	(1,167,175)	-	NM	NM	N/A
2022	KKR European Fund VI (USD)	N/A	67,500,000	-	-	(1,044,211)	-	NM	NM	N/A
2023	Bridgepoint Europe VII	N/A	59,754,745	-	-	(1,024,357)	-	NM	NM	N/A
2023	Bridgepoint Europe VII Co-Invest	N/A	29,885,620	-	-	-	-	NM	NM	N/A
2023	Apollo Investment Fund X, L.P.	N/A	123,000,000	-	-	(1,946,926)	-	NM	NM	N/A
2023	Apollo Fund X NYC Sidecar Co-Invest, L.P.	N/A	41,000,000	-	-	-	-	NM	NM	N/A
Total Portfolio⁷			\$ 16,873,731,569	\$ 13,788,775,262	\$ 13,476,035,425	\$ 8,301,694,932	1.58x	11.1%	10.4%	0.7%

¹ Performance for funds with less than eight (8) quarters of activity is not meaningful.

² Russell 3000 PME+ or Long-Nickels PME for investments with no distributed capital as of quarter-end.

³ PME Spread is calculated as IRR minus PME Return.

⁴ NYCERS - 2012 Emerging Manager Program includes the total commitment amount of \$139.6 million. The Program's original commitment amount of \$150 million was subsequently revised to \$139.6 million, all of which has been committed. The remaining \$10.4 million was reallocated to the NYCERS - 2015 Emerging Manager Program.

⁵ NYCERS - 2015 Emerging Manager Program includes the total commitment amount of \$158.8 million. The Program's original commitment amount of \$190.4 million, which included the original \$180.0 million commitment and the \$10.4 million reallocation from the NYCERS - 2012 Emerging Manager Program, was subsequently revised to \$158.8 million. All \$158.8 million has been committed, and the remaining \$31.7 million was reallocated to the NYCERS - 2019 Emerging Manager Program.

⁶ NYCERS - 2019 Emerging Manager Program commitment amount totals \$247.7 million, which includes the Program's original \$216.0 million commitment and the \$31.7 million reallocation from the NYCERS - 2015 Emerging Manager Program. As of March 31, 2023, \$122.0 million has been committed.

⁷ Total Portfolio includes liquidated investments.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

The referenced indices are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

Note: IRRs presented are interim estimates and may not be indicative of the ultimate performance of fund investments due to a number of factors, such as the lack of industry valuation standards and the differences in the investment pace and strategy of various funds. Until a fund is liquidated, typically over 10 to 12 years, the IRR is only an interim estimated return. The IRR calculated in early years of a fund is not meaningful given the J-curve effect. The actual IRR performance of any fund is not known until all capital contributed and earnings have been distributed to the investor. The IRRs contained in this report are calculated by StepStone Group LP ("StepStone"), a consultant to the New York City Employees' Retirement System, based on information provided by the general partners (e.g. cash flows and valuations). The IRR calculations and other information contained in this report have not been reviewed or confirmed by the general partners. The result of the IRR calculation may differ from that generated by the general partner or other limited partners. Differences in IRR calculations can be affected by cash-flow timing, the accounting treatment of carried interest, fund management fees, advisory fees, organizational fees, other fund expenses, sale of distributed stock, and valuations. IRR and TVPI for certain vehicles may have been impacted by StepStone's or the underlying GPs' use of subscription-backed credit facilities by such vehicles. Reinvested/recycled amounts increase contributed capital.

New York City Employees' Retirement System
Subsequent Commitments
As of March 31, 2023 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
Commitments Closed Subsequent to as of Date										
2023	ASF IX B L.P.	N/A	\$ 69,200,000	\$ -	\$ -	\$ -	N/A	N/A	N/A	N/A
2023	ASF IX B NYC Co-Invest L.P.	N/A	103,800,000	-	-	-	N/A	N/A	N/A	N/A
2023	New 2ND Capital Fund III, L.P.	N/A	18,000,000	-	-	-	N/A	N/A	N/A	N/A
2023	New 2ND Capital N Sidecar, L.P.	N/A	9,000,000	-	-	-	N/A	N/A	N/A	N/A
2023	Clayton, Dubilier & Rice Fund XII, L.P.	N/A	94,000,000	-	-	-	N/A	N/A	N/A	N/A
2023	EQT Future (No.2) SCSp	N/A	62,216,954	-	-	-	N/A	N/A	N/A	N/A
2023	EQT Future Co-Invest	N/A	62,216,954	-	-	-	N/A	N/A	N/A	N/A
Total Commitments Closed Subsequent to as of Date			\$ 418,433,908	\$ -	\$ -	\$ -	N/A	N/A	N/A	N/A

¹ Performance for funds with less than eight (8) quarters of activity is not meaningful.

² Russell 3000 PME+

³ PME Spread is calculated as IRR minus PME Return.

Note: IRRs presented are interim estimates and may not be indicative of the ultimate performance of fund investments due to a number of factors, such as the lack of industry valuation standards and the differences in the investment pace and strategy of various funds. Until a fund is liquidated, typically over 10 to 12 years, the IRR is only an interim estimated return. The IRR calculated in early years of a fund is not meaningful given the J-curve effect. The actual IRR performance of any fund is not known until all capital contributed and earnings have been distributed to the investor. The IRRs contained in this report are calculated by StepStone Group LP ("StepStone"), a consultant to the New York City Employees' Retirement System, based on information provided by the general partners (e.g. cash flows and valuations). The IRR calculations and other information contained in this report have not been reviewed or confirmed by the general partners. The result of the IRR calculation may differ from that generated by the general partner or other limited partners. Differences in IRR calculations can be affected by cash-flow timing, the accounting treatment of carried interest, fund management fees, advisory fees, organizational fees, other fund expenses, sale of distributed stock, and valuations. IRR and TVPI for certain vehicles may have been impacted by StepStone's or the underlying GPs' use of subscription-backed credit facilities by such vehicles. Reinvested/recycled amounts increase contributed capital.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.



Quarterly Private Equity Market Overview

For the Period Ended March 31, 2023 | Confidential

IMPORTANT INFORMATION

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On September 20, 2021, StepStone Group Inc. acquired Greenspring Associates, Inc. (“Greenspring”). Upon the completion of this acquisition, the management agreement of each Greenspring vehicle was assigned to StepStone Group LP

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All valuations are based on current values calculated in accordance with StepStone’s Valuation Policies and may include both realized and unrealized investments. Due to the inherent uncertainty of valuation, the stated value may differ significantly from the value that would have been used had a ready market existed for all of the portfolio investments, and the difference could be material. The long-term value of these investments may be lesser or greater than the valuations provided.

StepStone Group LP, its affiliates and employees are not in the business of providing tax, legal or accounting advice. Any tax-related statements contained in these materials are provided for illustration purposes only and cannot be relied upon for the purpose of avoiding tax penalties. Any taxpayer should seek advice based on the taxpayer’s particular circumstances from an independent tax advisor.

Prospective investors should inform themselves and take appropriate advice as to any applicable legal requirements and any applicable taxation and exchange control regulations in the countries of their citizenship, residence or domicile which might be relevant to the subscription, purchase, holding, exchange, redemption or disposal of any investments. Each prospective investor is urged to discuss any prospective investment with its legal, tax and regulatory advisors in order to make an independent determination of the suitability and consequences of such an investment.

An investment involves a number of risks and there are conflicts of interest. Please refer to the risks and conflicts disclosed herein.

Each of StepStone Group LP, StepStone Group Real Assets LP, StepStone Group Real Estate LP, StepStone Group Private Wealth LLC and StepStone Group Private Debt LLC is an investment adviser registered with the Securities and Exchange Commission (“SEC”). StepStone Group Europe LLP is authorized and regulated by the Financial Conduct Authority, firm reference number 551580. StepStone Group Europe Alternative Investments Limited (“SGEAIL”) is an investment adviser registered with the SEC and an Alternative Investment Fund Manager authorized by the Central Bank of Ireland and Swiss Capital Alternative Investments AG (“SCAI”) is an SEC Exempt Reporting Adviser and is licensed in Switzerland as an Asset Manager for Collective Investment Schemes by the Swiss Financial Markets Authority FINMA. Such registrations do not imply a certain level of skill or training and no inference to the contrary should be made.

In relation to Switzerland only, this document may qualify as “advertising” in terms of Art. 68 of the Swiss Financial Services Act (FinSA). To the extent that financial instruments mentioned herein are offered to investors by SCAI, the prospectus/offering document and key information document (if applicable) of such financial instrument(s) can be obtained free of charge from SCAI or from the GP or investment manager of the relevant collective investment scheme(s). Further information about SCAI is available in the SCAI Information Booklet which is available from SCAI free of charge.

All data is as of March 31, 2023, unless otherwise noted.

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. ACTUAL PERFORMANCE MAY VARY.

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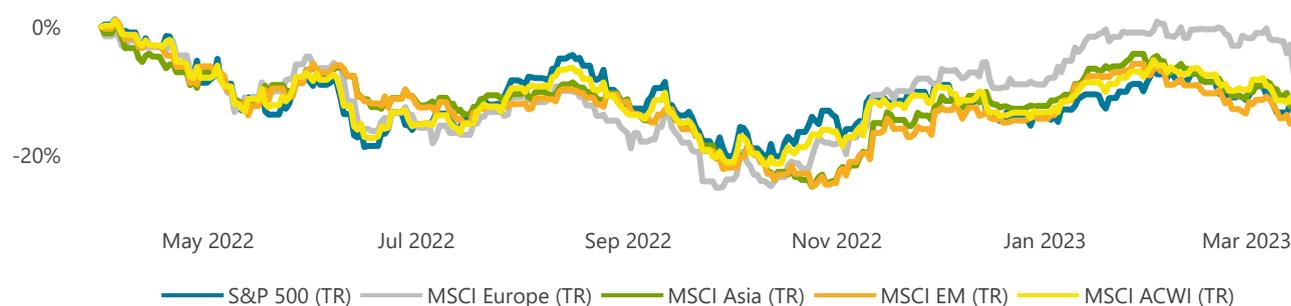
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I. Capital Markets Overview

Public Equity Markets

US equity markets whipsawed throughout Q1 2023 but were up overall along with global equities markets as recession concerns saw some dissipation on the back of relative optimism during the quarter around inflation and central bank policy. International equities gained in the first quarter of 2023, on the heels of a weaker US Dollar and less hawkish signals from central bank officials at the time. Emerging markets, while positive for the quarter, lagged developed market equities. Despite the reopening of China’s economy, US-China tensions have escalated, followed by a loss of confidence in regional US (failure of SVB) and European banks, which brought returns down. Amongst equities, the technology sector was the top performer, bolstered by prospects during the quarter of a less aggressive monetary policy, which revitalized interest in growth stocks. Conversely, the financial sector trailed behind, due to pressures faced by regional banks. Attention during the quarter remained on inflation and central bank policy – early in the year, consensus was that a recession was likely at some point in 2023; however, economic data has been mixed (e.g., tight labor market, inverted yield curve, inflation metrics), suggesting a higher-for-longer Fed policy. This uncertainty, along with macro events, have led to continued volatility in the market with the VIX ending the quarter above the 10-year average.

1 - Year Global Public Indices Returns



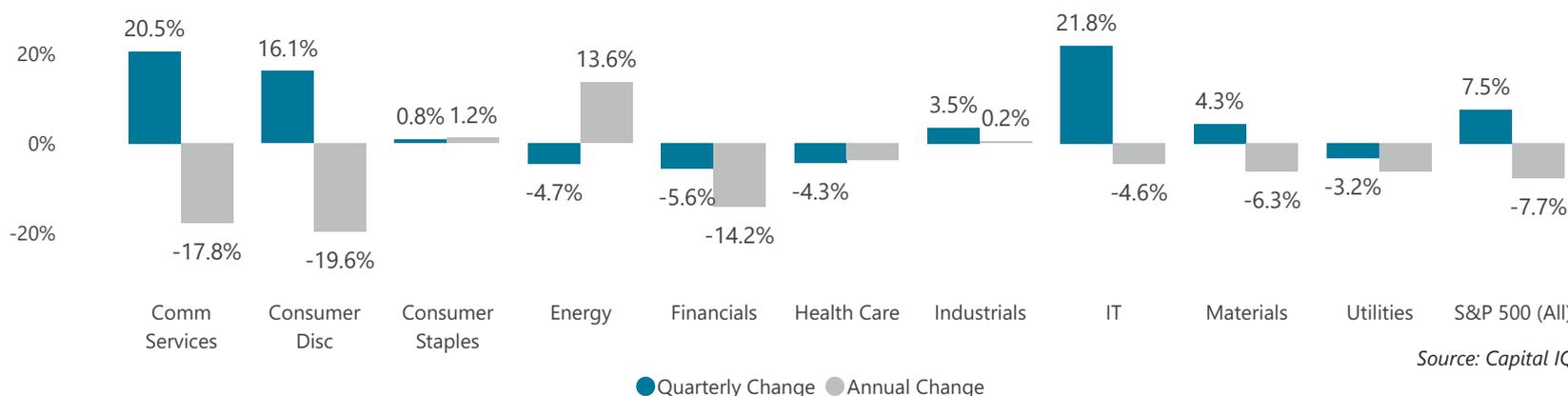
Source: Capital IQ

	3 Mo	1 Yr	3 Yr	5 Yr	10 Yr
MSCI Asia (TR)	5.1%	-7.9%	7.4%	0.8%	4.8%
MSCI Europe (TR)	10.7%	0.8%	15.7%	5.0%	6.0%
MSCI EM (TR)	4.0%	-10.9%	8.2%	-0.5%	2.4%
MSCI ACWI (TR)	7.4%	-7.0%	15.9%	7.5%	8.6%
S&P 500	7.0%	-9.3%	16.7%	9.2%	10.1%
S&P 500 (TR)	7.5%	-7.7%	18.6%	11.2%	12.2%

Source: Capital IQ

* Returns for time periods greater than one year are annualized.

S&P 500 Performance by Industry



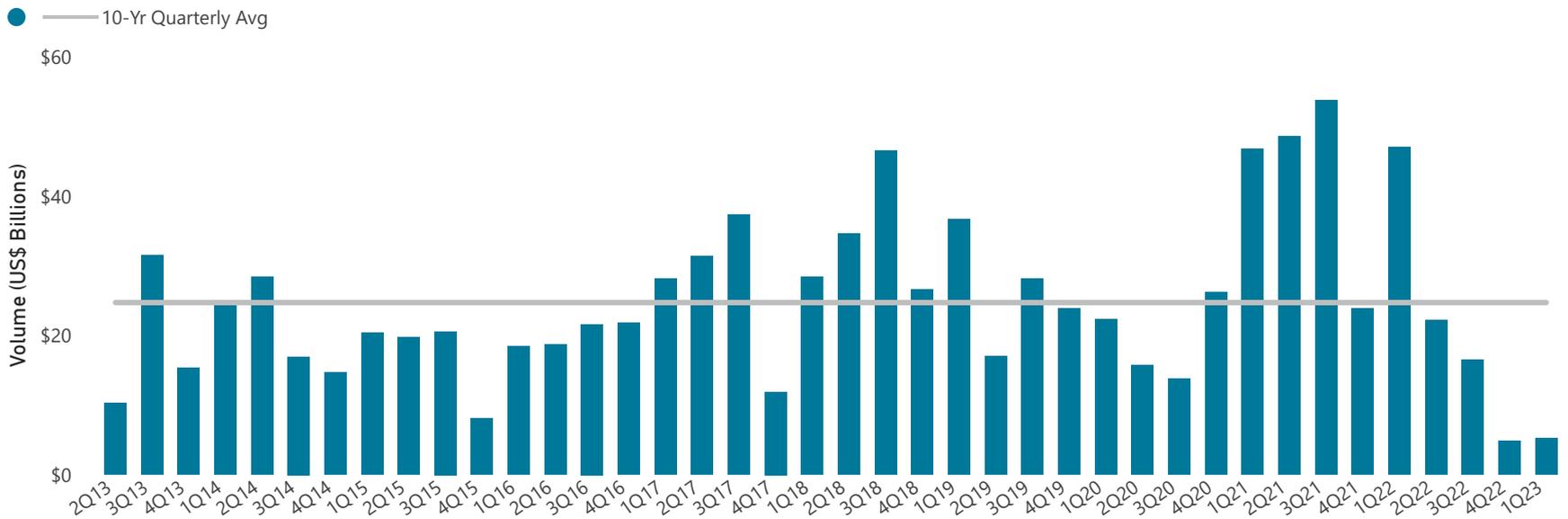
Source: Capital IQ

● Quarterly Change ● Annual Change

Debt Markets

US LBO debt volume totaled US\$5.3 billion during Q1 2023, 8% more than the previous quarter and 89% less than Q1 2022. Q1 volume is 79% lower than the 10-year quarterly average of US\$24.7 billion. The following chart shows the quarterly volume of US LBO new loan issuance for the past ten years.

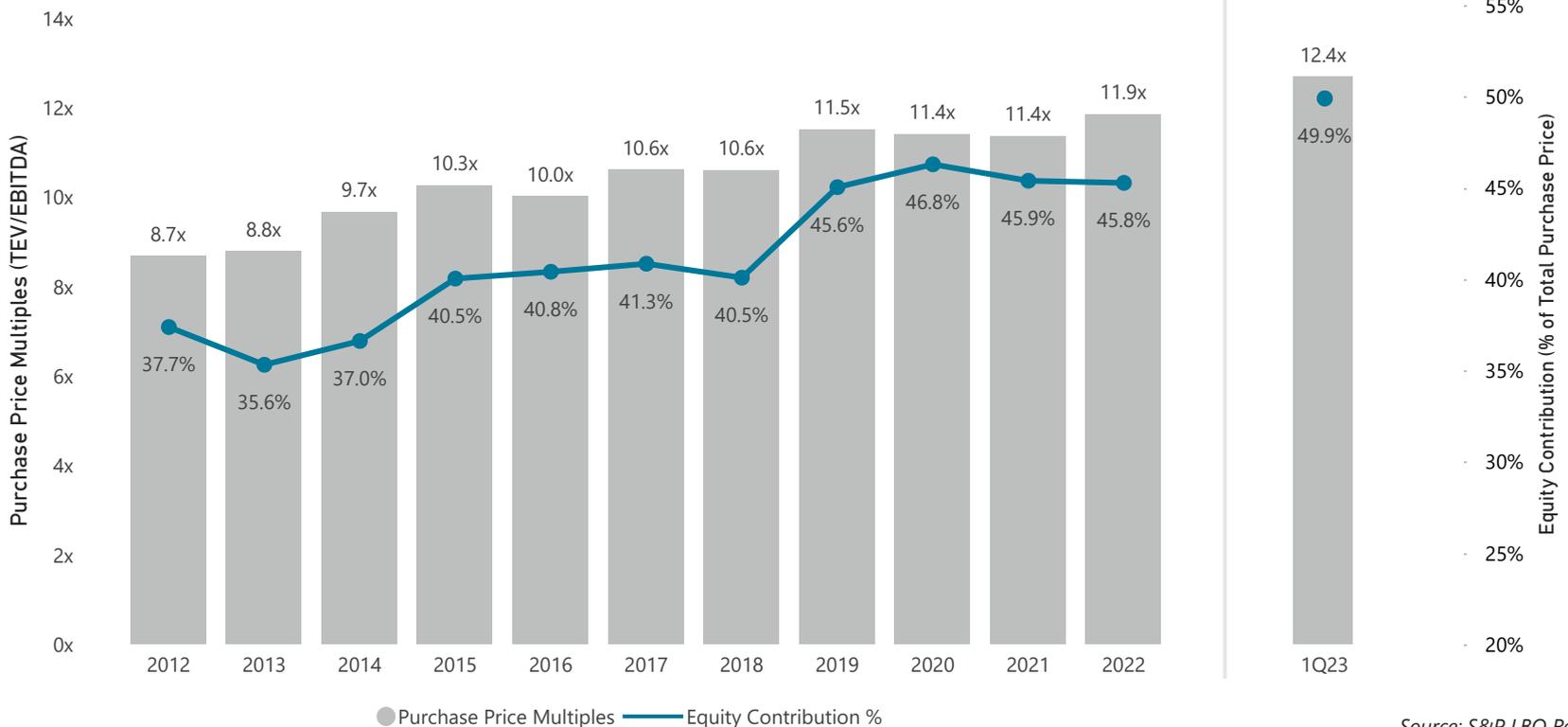
Debt New Issuance



Source: S&P Global Market Intelligence, Total US LBO Loan Volume

The following chart compares purchase price multiples and equity contribution percentages for U.S. LBO deals.

Purchase Price Multiples and Equity Contribution for all LBOs



Source: S&P LBO Review

II. Private Equity Market Overview

Private Equity Performance

Private equity returns for Q1 2023 ended the quarter up 2.1% compared to only 1.0% the prior quarter. Buyout funds continued to post the highest quarterly performance, generating a gain of 2.8% during the quarter.

Quarterly Returns

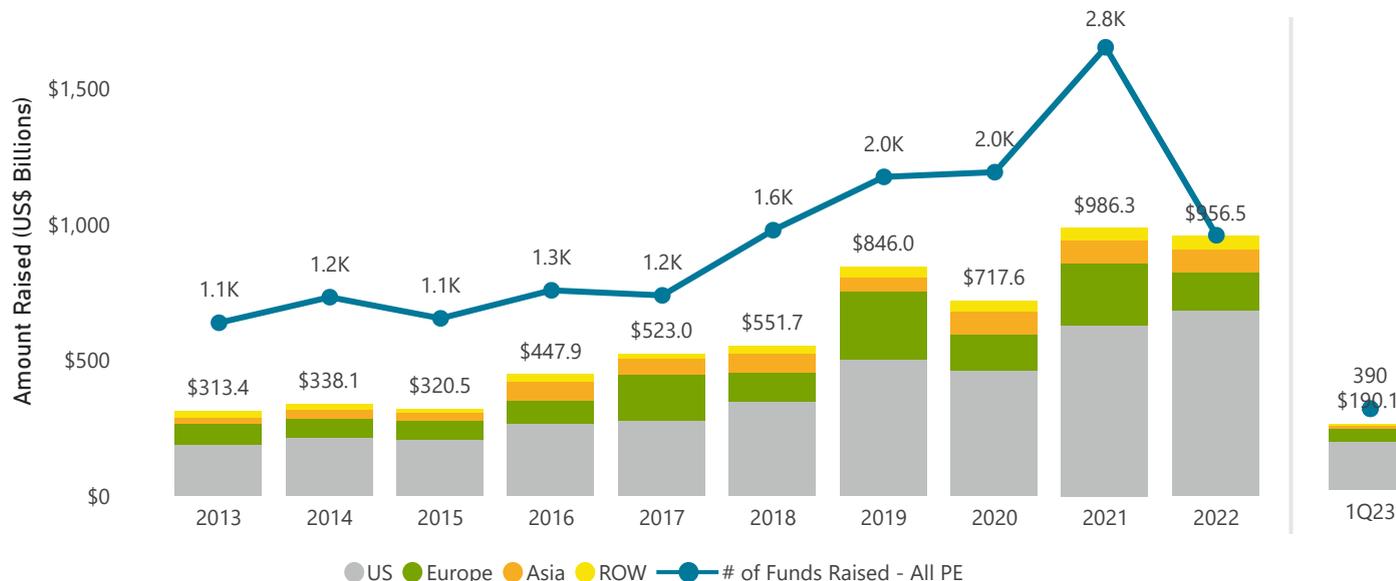


Source: StepStone Portfolio Analytics & Reporting ("SPAR") Omni Universe Benchmark Composite. SPAR data is continuously updated; values are subject to change. Based on latest available NAVs reported as of March 31, 2023.

Fundraising

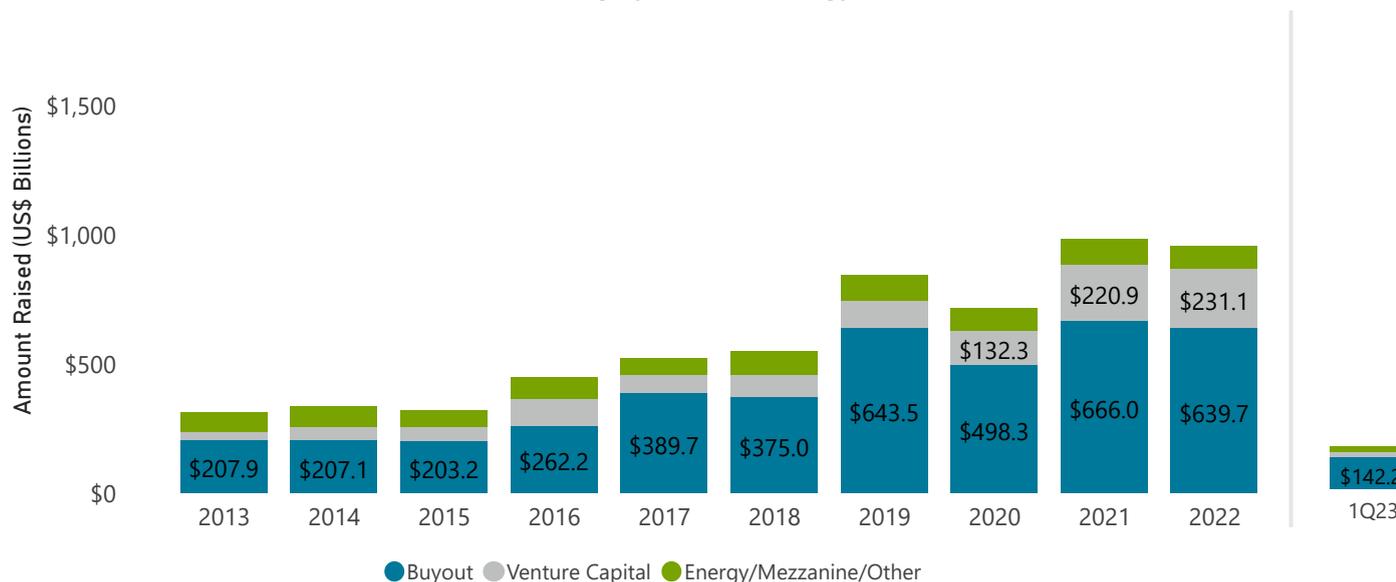
Global private equity fundraising totaled US\$190.1 billion during Q1 2023, 6% less than the previous quarter and 23% less than Q1 2022. Buyout fundraising, which represented 75% of the total amount raised for the quarter, totaled US\$142.2 billion, a decrease of 5% from the prior quarter and 1% compared to the prior year period. Venture Capital raised US\$22.0 billion in Q1, a decrease of 28% quarter-over-quarter and a decrease of 75% compared to Q1 2022. The charts below depict annual private equity fundraising activity by geography and strategy.

Fundraising by Year - Geography



Source: Refinitiv

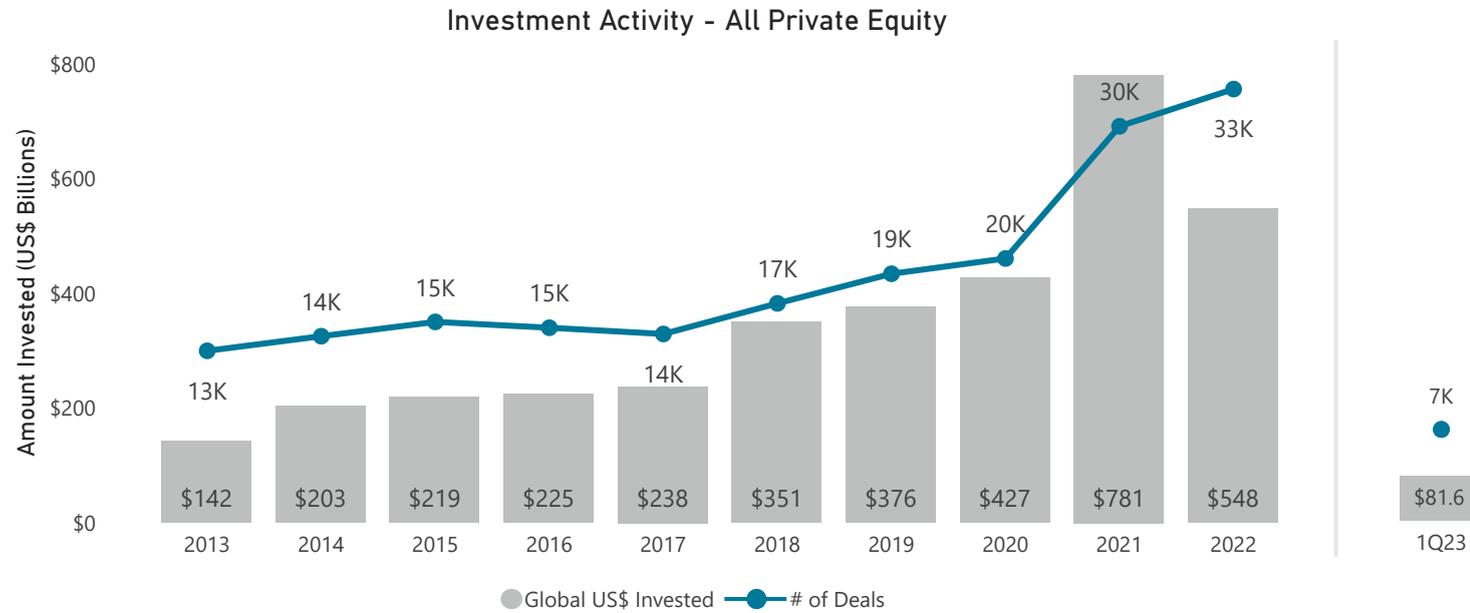
Fundraising by Year - Strategy



Source: Refinitiv

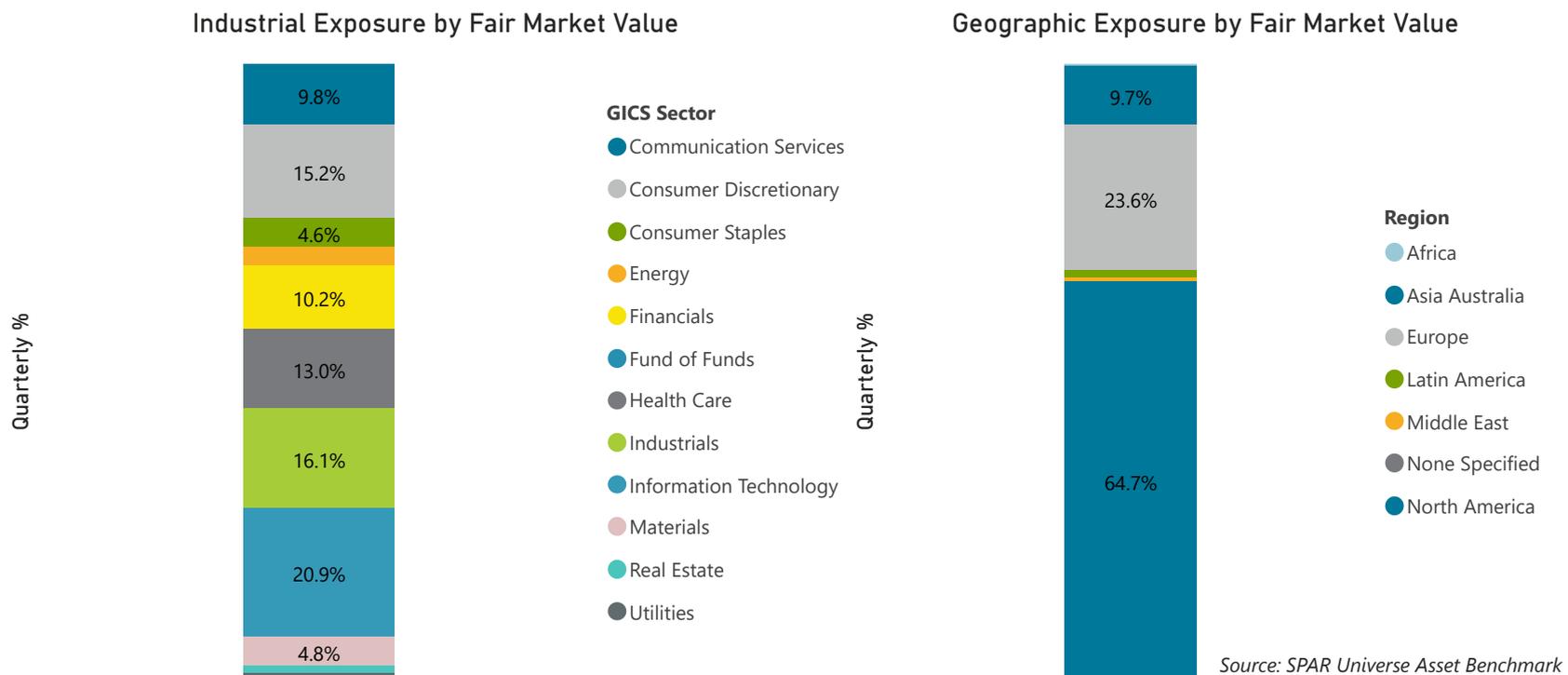
Investment Activity

Private equity funds invested US\$81.6 billion during Q1 2023, representing a quarter-over-quarter decrease of 32% and a decrease of 58% from Q1 2022. The average investment size during the quarter was US\$10.9 million, a decrease of 55% compared to the average investment size of US\$24.3 million in Q1 2022.



Source: Refinitiv

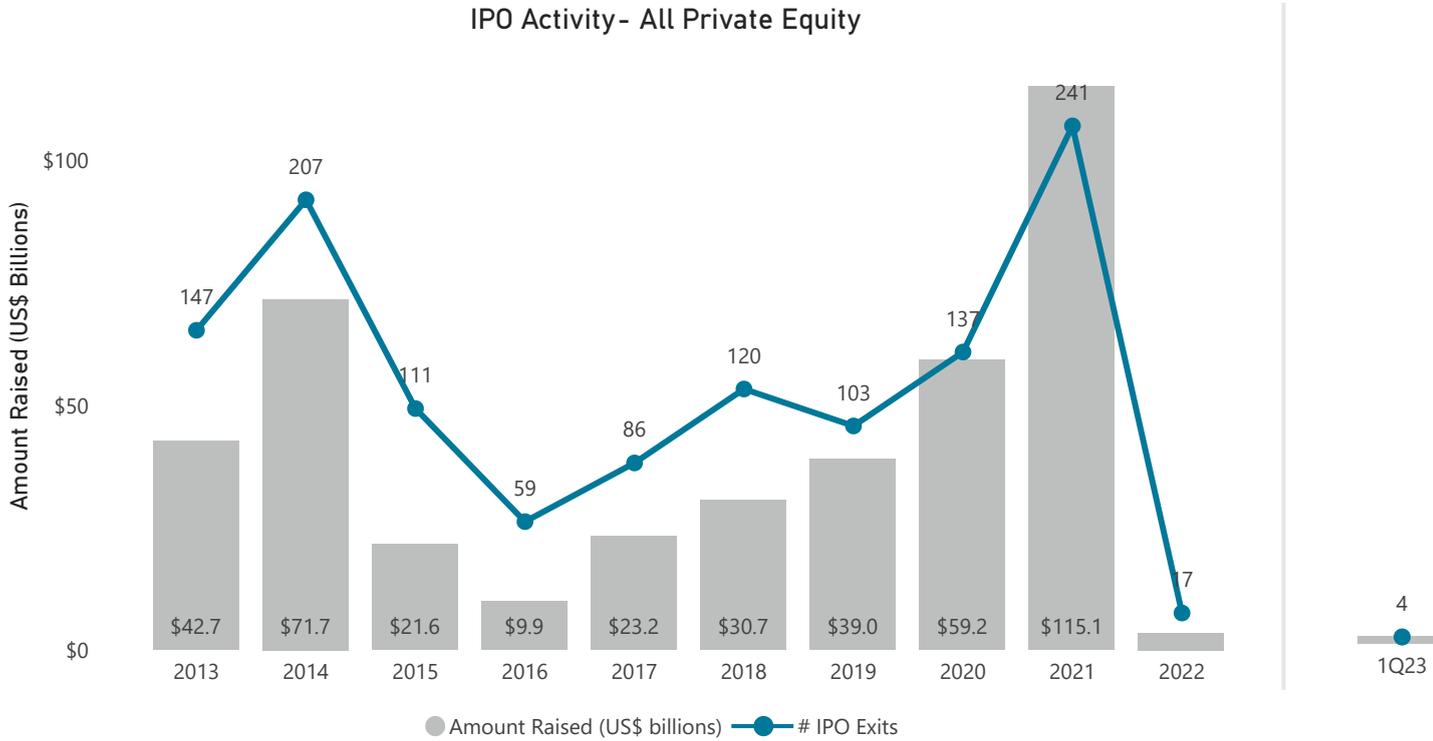
The graphs below depict the percentage of exposed market value by industry and geography as of Q1 2023. Companies operating in Information Technology accounted for 21% of total market value exposed. Geographically, North America comprised 65% of total market value exposed with European investments accounting for 24%.



Source: SPAR Universe Asset Benchmark

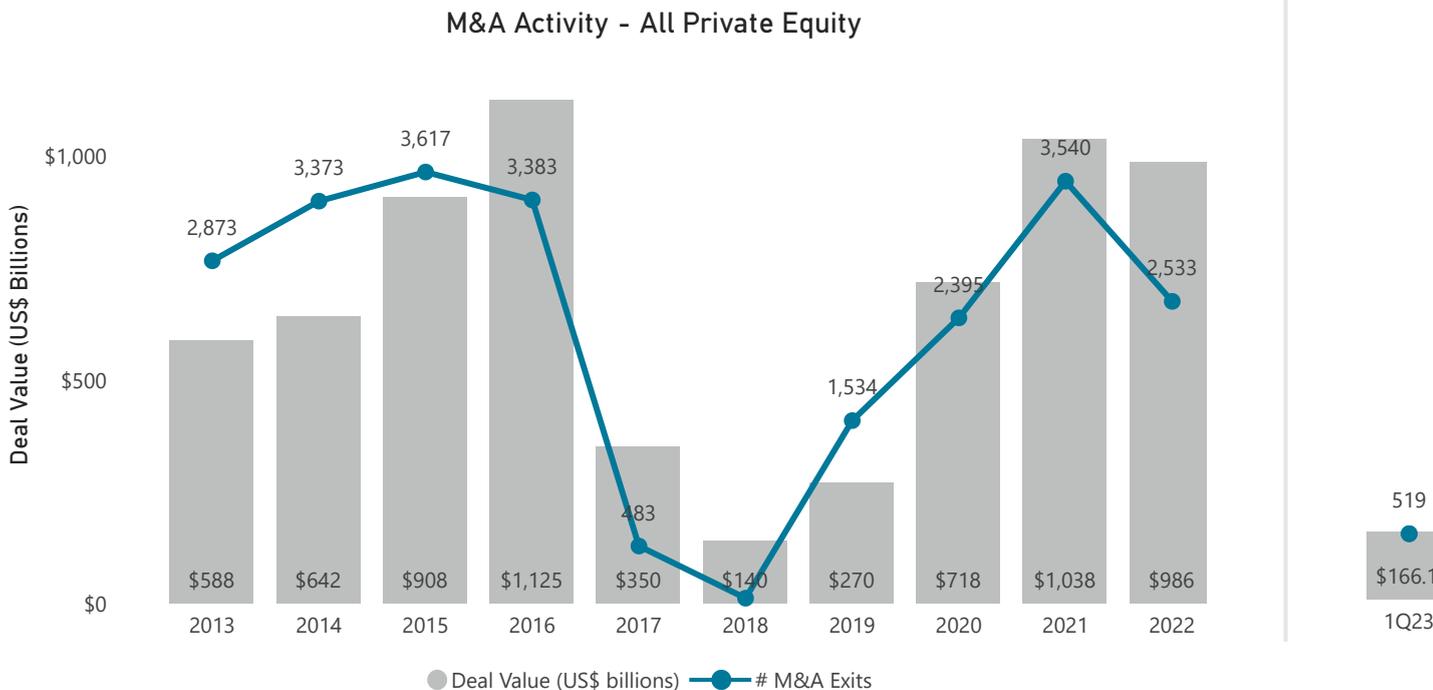
Exit Environment

The largest Initial Public Offering (“IPO”) during Q1 2023 was completed by NEXTracker Inc. (NASDAQ: NXT) in February, which raised US\$638 million.



Source: Refinitiv

The largest private equity-backed Mergers and Acquisitions M&A (“M&A”) deals of the quarter were the US\$13.8 billion acquisition of Store Capital, LLC by GIC Real Estate, Inc. and Oak Street Real Estate Capital, LLC and the US\$9.1 billion acquisition of Coupa Software, Inc. by Abu Dhabi Investment Authority and Thoma Bravo. Together these deals represented 13.8% of the total value for all deals during the quarter. The graph below shows the deal value and the number of M&A deals.



Source: Capital IQ

RISK AND CONSIDERATIONS

Risks Associated with Investments. Identifying attractive investment opportunities and the right underlying fund managers is difficult and involves a high degree of uncertainty. There is no assurance that the investments will be profitable and there is a substantial risk that losses and expenses will exceed income and gains.

Restrictions on Transfer and Withdrawal; Illiquidity of Interests; Interests Not Registered. The investment is highly illiquid and subject to transfer restrictions and should only be acquired by an investor able to commit its funds for a significant period of time and to bear the risk inherent in such investment, with no certainty of return. Interests in the investment have not been and will not be registered under the laws of any jurisdiction. Investment has not been recommended by any securities commission or regulatory authority. Furthermore, the aforementioned authorities have not confirmed the accuracy or determined the adequacy of this document.

Limited Diversification of Investments. The investment opportunity does not have fixed guidelines for diversification and may make a limited number of investments.

Reliance on Third Parties. StepStone will require, and rely upon, the services of a variety of third parties, including but not limited to attorneys, accountants, brokers, custodians, consultants and other agents and failure by any of these third parties to perform their duties could have a material adverse effect on the investment.

Reliance on Managers. The investment will be highly dependent on the capabilities of the managers.

Risk Associated with Portfolio Companies. The environment in which the investors directly or indirectly invests will sometimes involve a high degree of business and financial risk. StepStone generally will not seek control over the management of the portfolio companies in which investments are made, and the success of each investment generally will depend on the ability and success of the management of the portfolio company.

Uncertainty Due to Public Health Crisis. A public health crisis, such as the recent outbreak of the COVID-19 global pandemic, can have unpredictable and adverse impacts on global, national and local economies, which can, in turn, negatively impact StepStone and its investment performance. Disruptions to commercial activity (such as the imposition of quarantines or travel restrictions) or, more generally, a failure to contain or effectively manage a public health crisis, have the ability to adversely impact the businesses of StepStone's investments. In addition, such disruptions can negatively impact the ability of StepStone's personnel to effectively identify, monitor, operate and dispose of investments. Finally, the outbreak of COVID-19 has contributed to, and could continue to contribute to, extreme volatility in financial markets. Such volatility could adversely affect StepStone's ability to raise funds, find financing or identify potential purchasers of its investments, all of which could have material and adverse impact on StepStone's performance. The impact of a public health crisis such as COVID-19 (or any future pandemic, epidemic or outbreak of a contagious disease) is difficult to predict and presents material uncertainty and risk with respect to StepStone's performance.

Taxation. An investment involves numerous tax risks. Please consult with your independent tax advisor.

Conflicts of Interest. Conflicts of interest may arise between StepStone and investors. Certain potential conflicts of interest are described below; however, they are by no means exhaustive. There can be no assurance that any particular conflict of interest will be resolved in favor of an investor.

Allocation of Investment Opportunities. StepStone currently makes investments, and in the future will make investments, for separate accounts having overlapping investment objectives. In making investments for separate accounts, these accounts may be in competition for investment opportunities.

Existing Relationships. StepStone and its principals have long-term relationships with many private equity managers. StepStone clients may seek to invest in the pooled investment vehicles and/or the portfolio companies managed by those managers.

Carried Interest. In those instances where StepStone and/or the underlying portfolio fund managers receive carried interest over and above their basic management fees, receipt of carried interest could create an incentive for StepStone and the portfolio fund managers to make investments that are riskier or more speculative than would otherwise be the case. StepStone does not receive any carried interest with respect to advice provided to, or investments made on behalf, of its advisory clients.

Other Activities. Employees of StepStone are not required to devote all of their time to the investment and may spend a substantial portion of their time on matters other than the investment.

Material, Non-Public Information. From time to time, StepStone may come into possession of material, non-public information that would limit their ability to buy and sell investments.

ESG Integration. While StepStone seeks to integrate certain ESG factors into its investment process and firm operations, there is no guarantee that StepStone's ESG strategy will be successfully implemented or that any investments or operations will have a positive ESG impact. Applying ESG factors to investment decisions involves qualitative and subjective decisions and there is no guarantee the criteria used by StepStone to formulate decisions regarding ESG, or StepStone's judgment regarding the same, will be reflected in the beliefs or values of any particular client or investor. There are significant differences in interpretation of what constitutes positive ESG impact and those interpretations are rapidly changing. The description of ESG integration herein is provided to illustrate StepStone's intended approach to investing and firm operations; however, there is no guarantee that the processes will be followed in every circumstance or at all.

Performance Information. No investment decisions may be made in reliance on this document. In considering performance information herein, readers should bear in mind that past performance is not necessarily indicative of future results and that actual results may vary. There can be no assurance that any StepStone fund will be able to successfully implement its investment strategy or avoid losses. Performance shown herein may include investments across different StepStone funds. The aggregate returns are not indicative of the returns an individual investor would receive from these investments. No individual investor received such aggregate returns as the investments were made across multiple funds and accounts over multiple years.

Real Estate Quarterly Report (Public):

Quarterly Real Estate Report



For the period ended March 31, 2023

Prepared at the Specific Request of:

Client:

New York City Public Pension Funds

Portfolio:

NYC ERS - Real Estate



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EXECUTIVE SUMMARY

StepStone Group LP (“StepStone”) was engaged by NYC Employees' Retirement System (“NYCERS”) to provide Real Estate services for prospective investment opportunities, as well as portfolio management on NYCERS' portfolio (the “Portfolio”). Inception date of the Portfolio was on December 2002.

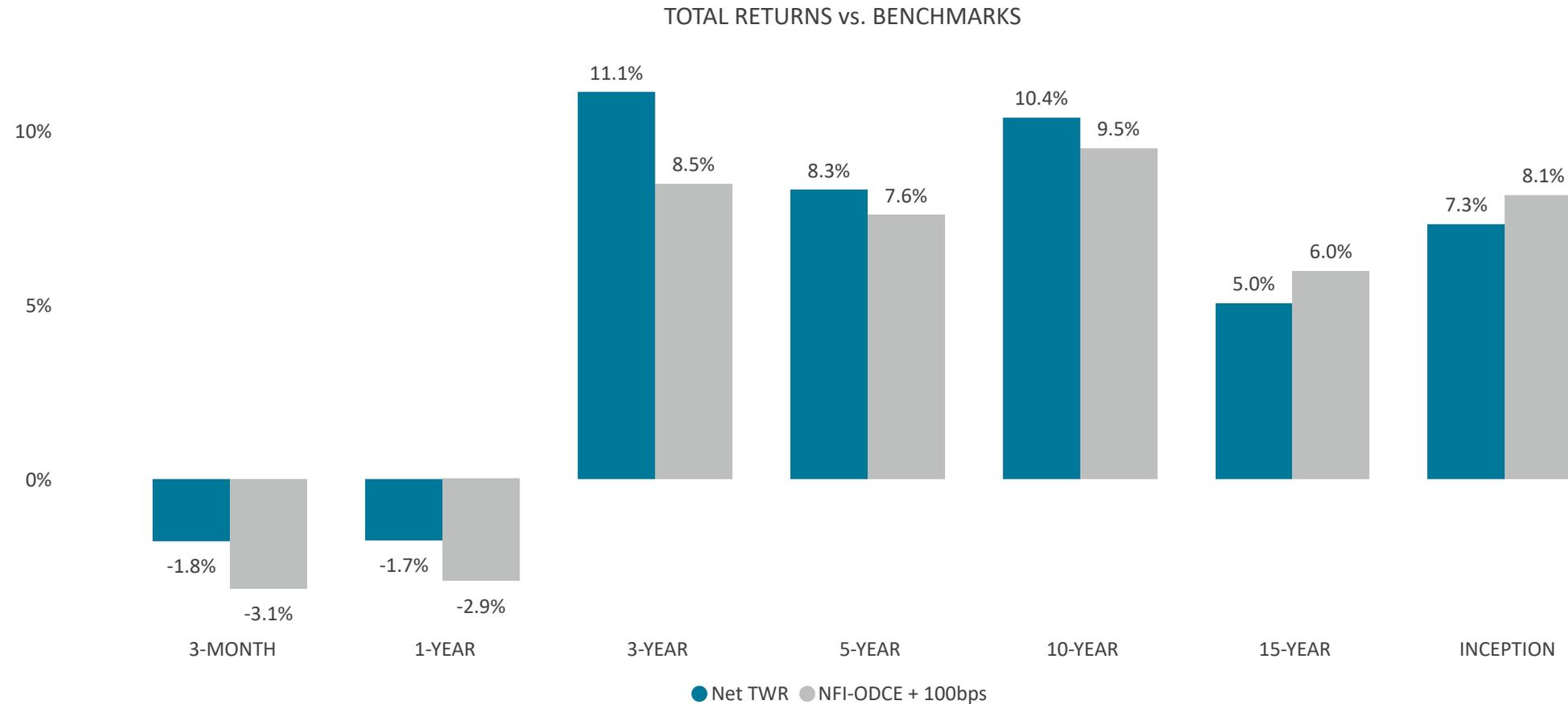
The following table illustrates the Portfolio's since inception investment performance as of March 31, 2023, as well as the quarter-over-quarter and year-over-year change.

\$US in millions ▲	INCEPTION TO CURRENT QUARTER	INCEPTION TO PRIOR QUARTER	INCEPTION TO PRIOR YEAR	QUARTERLY Δ	ANNUAL Δ
Number of Managers	58	57	56	1	2
Number of Investments	117	116	109	1	8
Number of Active Managers	49	48	48	1	1
Number of Active Investments	104	103	97	1	7
Active Investments Only					
Committed Capital	\$8,910.4	\$8,773.5	\$7,899.1	\$136.9	\$1,011.3
Unfunded Commitment	2,802.7	2,802.0	2,412.6	\$0.7	\$390.1
Total Exposure	8,548.2	8,594.0	8,123.3	(\$45.8)	\$424.9
Total Contributed	7,333.2	7,178.0	6,538.2	\$155.1	\$795.0
Total Distributed	5,087.2	4,989.0	4,409.6	\$98.2	\$677.6
Total Market Value	5,745.4	5,791.9	5,710.7	(\$46.5)	\$34.8
Since Inception G/L	3,499.4	3,602.9	3,582.0	(103.5)	(82.6)
Since Inception Returns, Includes Liquidated Investments					
Net DPI	0.73x	0.74x	0.72x	0.00x	0.01x
Gross TVM	1.57x	1.59x	1.65x	(0.02x)	(0.08x)
Gross IRR	10.5%	10.8%	11.4%	(30 bps)	(82 bps)
Net TVM	1.45x	1.48x	1.52x	-0.02x	-0.07x
Net IRR	8.2%	8.5%	9.0%	(30 bps)	(82 bps)

Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses. IRR and TVPI for certain vehicles may have been impacted by StepStone's or the underlying GP's use of subscription-backed credit facilities by such vehicles. Reinvested/recycled amounts increase contributed capital. Unless otherwise indicated, all underlying investment attribution and performance information presented is net of fees and expenses charged by the underlying investment, but gross of StepStone vehicle/account fees and expenses. Where indicated, net return figures presented for StepStone vehicle/account performance include fees and expenses paid to StepStone.

PORTFOLIO PERFORMANCE VS BENCHMARKS

The following table illustrates the Portfolio's periodic returns as of March 31, 2023 compared to benchmarks. The NFI-ODCE contains data from 26 core, open-ended funds investing in the United States. For the current quarter, the NFI-ODCE contained performance data from 3,544 investments, totaling over \$341.4 billion of gross real estate assets.



The NFI-ODCE differs from the NCREIF Property Index because it includes leverage, reports returns gross and net of fees, and all reporting funds must qualify according to the NFI-ODCE diversification and other standards (e.g., fund level leverage below 40%). The referenced benchmark is shown for general market comparison and is not meant to represent any particular fund. An investor cannot directly invest in the NFI-ODCE index. Moreover, the benchmark does not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

PORTFOLIO DIVERSIFICATION

The following charts outline the Portfolio's diversification by strategy and geographic regions, the limits of which are governed by the Policy Statement and Annual Plan. Funds that do not yet have NAVs are not included in the Allocation by Region analysis.

As of March 31, 2023. In USD millions.

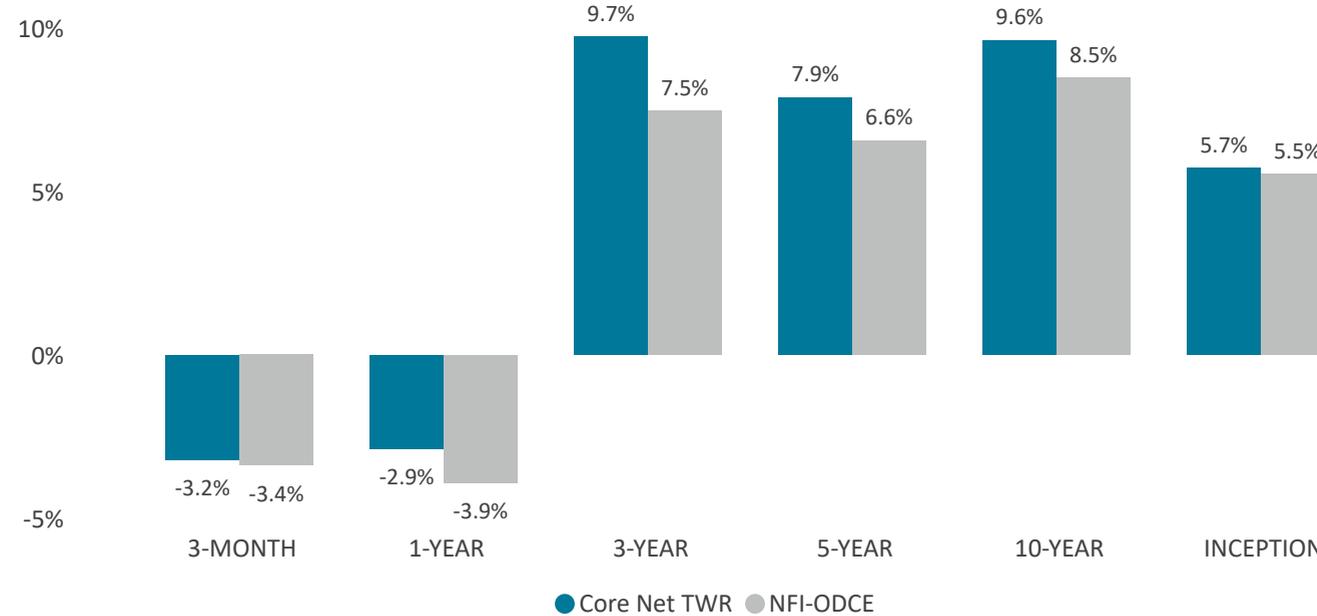
Allocation by Strategy	Net Asset Value	Net Asset Value (%)	Unfunded	Unfunded (%)	Total Exposure	Total Exposure (%)
Core	3,290.2	57%	310.5	11%	3,600.7	42%
Non-Core	2,455.2	43%	2,492.2	89%	4,947.4	58%
Total	5,745.4	100%	2,802.7	100%	8,548.2	100%
Emerging	176.8	3%	122.0	4%	298.8	3%
Debt	499.2	9%	136.6	5%	635.8	7%

Allocation by Region	Net Asset Value	%	Unfunded	%	Total Exposure	%
North America	5,082.7	88%	2,479.8	88%	7,562.0	88%
Europe	473.7	8%	231.1	8%	704.8	8%
Asia	166.6	3%	81.3	3%	247.8	3%
Rest of World	22.6	0%	11.0	0%	33.6	0%
Total	5,745.4	100%	2,802.7	100%	8,548.2	100%

CORE AND NON-CORE PERFORMANCE VS BENCHMARKS

The following graphs measure the Portfolio's Core and Non-Core performance against chosen benchmarks. The Portfolio's Core Time Weighted Returns are benchmarked against the NFI-ODCE. The Portfolio uses IRR by vintage year as a measurement of its Non-Core performance. A public market equivalent (PME) of 60% Russell 3000 and 40% Barclays Capital Aggregate Bond Index is used to measure the Portfolio's Non-Core Performance. The PME is calculated using the Portfolio cash flows to produce a return that would have been earned if the Portfolio cash flows were invested in the PME. Core Portfolio inception date is 4Q 2006.

CORE NET TWR vs. BENCHMARK



	2002	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Non-Core PME	9.8%	8.0%	8.0%	7.7%	7.9%	9.4%	10.4%	8.5%	9.2%	8.6%	7.9%	8.0%	8.4%	7.5%	7.3%	5.6%	4.2%	2.5%	(3.5%)	17.8%	NM
Non-Core Net IRR	11.1%	20.5%	(10.4%)	1.9%	7.2%	5.8%	8.8%	11.9%	17.0%	16.4%	9.2%	12.2%	14.3%	13.6%	12.3%	24.9%	14.8%	18.7%	4.1%	NM	NM

The referenced indices/benchmarks are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

NON-CORE NET IRR VS PME RETURNS

The following graph measures the Portfolio's Non-Core performance against chosen benchmarks. The Portfolio uses IRR by vintage year as a measurement of its Non-Core performance. A public market equivalent (PME) of 60% Russell 3000 and 40% Barclays Capital Aggregate Bond Index is used to measure the Portfolio's Non-Core Performance. The PME is calculated using the Portfolio cash flows to produce a return that would have been earned if the Portfolio cash flows were invested in the PME.

Vintage Year	First Quartile	Second Quartile	Third Quartile	Quartile Ranking	Net IRR	PME+
2002	29.2%	19.0%	8.1%	Third	11.1%	9.8%
2004	15.4%	3.7%	(3.7%)	First	20.5%	8.0%
2005	4.7%	1.4%	(7.6%)	Fourth	(10.4%)	8.0%
2006	3.8%	(2.3%)	(7.8%)	Second	1.9%	7.7%
2007	7.1%	2.9%	(5.6%)	First	7.2%	7.9%
2008	10.9%	5.8%	(2.2%)	Second	5.8%	9.4%
2009	13.5%	9.8%	5.5%	Third	8.8%	10.4%
2010	16.2%	11.2%	6.4%	Second	11.9%	8.5%
2011	18.0%	12.2%	5.8%	Second	17.0%	9.2%
2012	17.9%	11.5%	8.9%	Second	16.4%	8.6%
2013	15.4%	10.8%	3.9%	Third	9.2%	7.9%
2014	13.5%	7.1%	1.7%	Second	12.2%	8.0%
2015	13.7%	9.1%	2.7%	First	14.3%	8.4%
2016	14.7%	9.7%	3.6%	Second	13.6%	7.5%
2017	18.3%	11.8%	5.1%	Second	12.3%	7.3%
2018	17.2%	11.6%	7.2%	First	24.9%	5.6%
2019	17.0%	10.0%	1.5%	Second	14.8%	4.2%
2020	24.0%	13.2%	2.0%	Second	18.7%	2.5%
2021	20.0%	12.0%	0.0%	Third	4.1%	(3.5%)
2022	4.3%	(9.0%)	(26.1%)	NM	NM	17.8%
2023	(11.7%)	(16.2%)	(34.6%)	NM	NM	NM

PORTFOLIO PROFILE

New York City Employees Retirement Systems has allocated 7.5% of the total plan to Real Estate. The Real Estate Portfolio's objective is to generate a total net return that exceeds the Benchmark NFI-ODCE +100 bps total net return measured over full market cycles. Note: Beginning in Q1-2020, Total, Core/Core-Plus, and Non-Core real estate allocations changed to 7.5%, 3.5%, and 4%, respectively.

As of March 31, 2023. In USD millions.

NYC ERS - Real Estate	
Total Plan Assets (\$)	\$79,076,926,800
Real Estate Allocation (%)	7.5%
Real Estate Allocation (\$)	5,930,769,510
Real Estate Core Allocation (%)	3.5%
Real Estate Core Allocation (\$)	2,767,692,438
Real Estate Non-Core Allocation (%)	4.0%
Real Estate Non-Core Allocation (\$)	3,163,077,072
Number of Active Managers	49
Number of Active Investments	104

Total Portfolio - Active Investments Only	
Net Asset Value	\$5,745,432,751
Unfunded	2,802,732,696
Commitment	8,910,393,320
Total Exposure	8,548,165,447
Total Exposure as a % of Target	144.1%
NAV as a % of Target	96.9%
% Plan Assets (NAV / Exposure)	7.3% / 10.8%

Core / Core-Plus - Active Investments Only	
Net Asset Value	\$3,290,201,566
Unfunded	310,547,034
Commitment	2,895,639,957
Total Exposure	3,600,748,600
Total Exposure as a % of Target	130.1%
NAV as a % of Target	118.9%
% Plan Assets (NAV / Exposure)	4.2% / 4.6%

Non-Core - Active Investments Only	
Net Asset Value	\$2,455,231,185
Unfunded	2,492,185,662
Commitment	6,014,753,364
Total Exposure	4,947,416,847
Total Exposure as a % of Target	156.4%
NAV as a % of Target	77.6%
% Plan Assets (NAV / Exposure)	3.1% / 6.3%

Net Returns - Active and Liquidated Investments

Quarterly Net TWR	-1.8%
1-Year Net TWR	-1.7%
2-Year Net TWR	13.2%
3-Year Net TWR	11.1%
5-Year Net TWR	8.3%
10-Year Net TWR	10.4%
15-Year Net TWR	5.0%
ITD Net TWR	7.3%
NFI-ODCE +100bps	8.1%
Net IRR	8.2%
Net TVM	1.45x

Category	Requirement	Portfolio Status
Benchmark	Comprised of NFI-ODCE (Net) +100 bps	Portfolio returns outperform the benchmark over the quarter-to-date, one-year, three-year, five-year, and ten-year time periods, while underperforming the fifteen-year benchmark.
Portfolio Construction	Core/Core-Plus (3.5%)	Market value plus unfunded commitment place the Portfolio at 42.1% Core/Core-Plus and 57.9% Non-Core. Based on market value, the Portfolio is 57.3% Core/Core-Plus and 42.7% Non-Core.
	Non-Core (4%)	
Real Estate Allocation	Target 7.5%	Market value plus unfunded commitment place the Portfolio at 10.8% of total plan assets. Based on market value, the Portfolio is 7.3% of total plan assets' market value.
Property Type Diversification	Up to 40% Multifamily Up to 35% Industrial Up to 45% Office Up to 35% Retail Up to 25% Hotel Up to 20% Other	All property type allocations are compliant.
Geographic Diversification	Diversified geographically; Max 25% Ex-U.S.	All geographic allocations are compliant.
LTV	65.0%	The leverage (40.7%) is compliant.
Manager Exposure	20% of real estate allocation	All manager allocations are compliant.

Note: Beginning in Q1-2020, Total, Core/Core-Plus, and Non-Core real estate allocations changed to 7.5%, 3.5%, and 4%, respectively.

PORTFOLIO REVIEW

Quarterly Highlights

Cash Flow Activity

During the first quarter of 2023, the Portfolio made \$155.1 million of contributions and received \$98.2 million of distributions, for a net cash outflow of (\$57.0) million, compared to a net cash outflow of (\$27.6) million during the fourth quarter of 2022. Contributions decreased (12.8%) from the prior quarter and decreased (42.2%) from the first quarter of 2022. The last twelve month (“LTM”) quarterly average of the Portfolio's contributions is \$213.7 million. Distributions decreased (34.7%) from the prior quarter and decreased (53.4%) from the first quarter of 2022. The LTM quarterly average of the Portfolio's distributions is \$179.0 million.

Recent Portfolio Activity

During the first quarter of 2023, net of cash flow activity, the Portfolio's value decreased (\$103.5) million, or (1.8%) from the prior quarter. During the LTM period, net of cash flow activity, the Portfolio's value increased \$173.7 million, or 3.0%, from the first quarter of 2022.

New Investment Commitments

During the first quarter of 2023, the Portfolio closed on 1 new investments, totaling \$135.0 million of committed capital.

Fund Name	Month Closed	Sub-Strategy	Geographic Focus	Committed Capital
Waterton Residential Property Venture XV	Jan, 2023	Non-Core	US	135.0

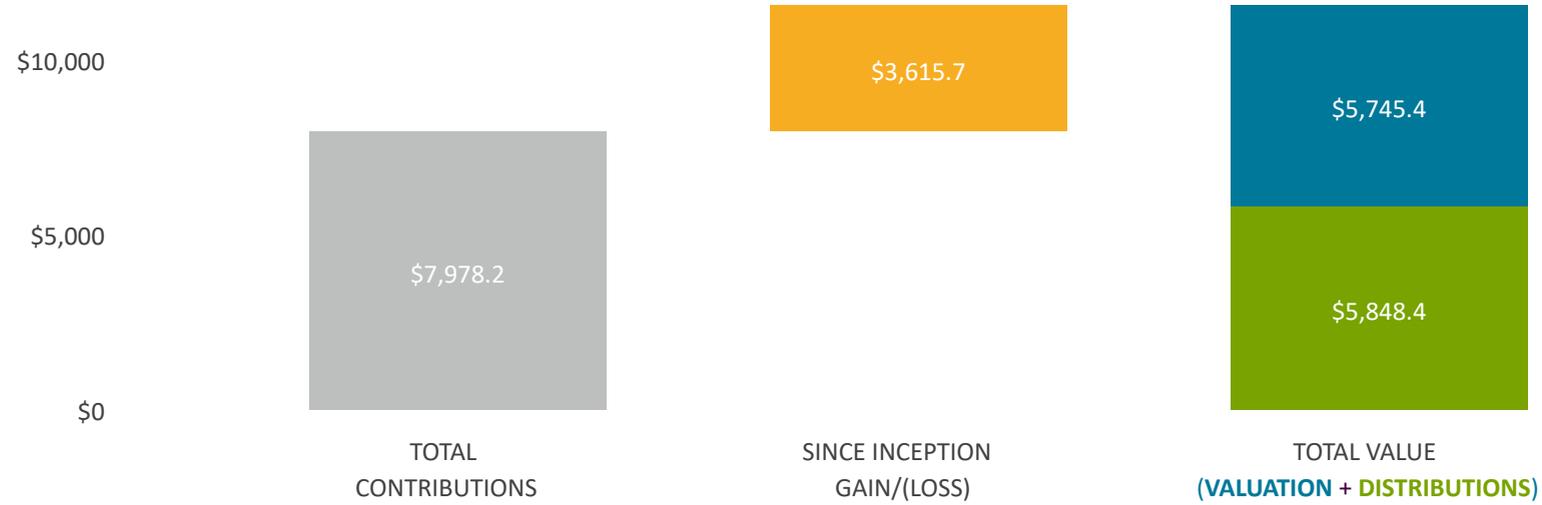
Subsequent Investment Commitments

During the second quarter of 2023, the Portfolio closed on 1 new investments.\$81.9

Fund Name	Month Closed	Sub-Strategy	Geographic Focus	Committed Capital
Blackstone Real Estate Partners Europe VII SCSp	Jun, 2023	Non-Core	Europe	81.9

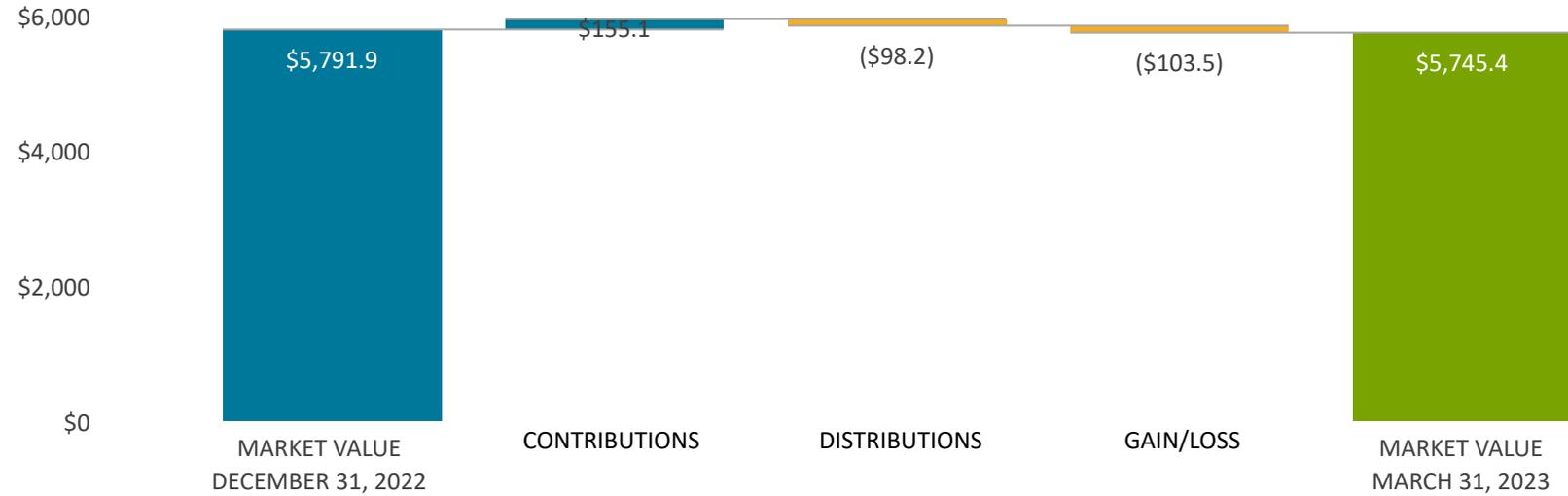
SINCE INCEPTION VALUATION MOVEMENT

Through March 31, 2023, NYC ERS - Real Estate's portfolio has generated a gain of \$3,615.7 million.



QUARTERLY VALUATION MOVEMENT

During the first quarter of 2023, the value of NYC ERS - Real Estate's portfolio decreased by (\$103.5) million, or (1.8%).



Quarterly Top Investment Gains and Losses

As of March 31, 2023. In USD millions.

INVESTMENT	\$	%
ElmTree U.S. Net Lease Fund IV, L.P.	\$5.8	11%
Brookfield Strategic Real Estate Partners III, L.P.	\$5.1	4%
H2 Special Opportunities IV	\$2.9	3%
Blackstone Real Estate Partners Europe VI L.P.	\$1.7	4%
H2 Special Opportunities III	\$1.4	9%
Largest Increases in Value	\$16.9	5%

INVESTMENT	\$	%
Cortland Growth and Income, L.P.	(\$17.7)	(11%)
RREEF America REIT II	(\$13.9)	(6%)
Brookfield Premier Real Estate Partners	(\$10.7)	(4%)
Jamestown Premier Property Fund	(\$9.8)	(28%)
JP Morgan Special Situation Property Fund	(\$8.1)	(5%)
Largest Decreases in Value	(\$60.3)	(7%)

PERFORMANCE BY VINTAGE YEAR

The following table and chart illustrate the Portfolio's since inception investment performance by vintage year, relative to a blended PME benchmark comprised of Russell 3000 and Barclays Capital Aggregate Bond Index at a 50/50 ratio. The PME benchmark is used to measure the Portfolio's performance, using the respective vintage year Portfolio cash flows to produce a return that would have been earned if those same vintage year cash flows were invested in the PME.

As of March 31, 2023. In USD millions.

Vintage Year	Commitment	Contributions	Distributions	NAV	Unfunded	Exposure	Net TVM	Net DPI	Net IRR	PME Returns	PME Spread
2002	15.0	13.7	16.4	0.0	0.0	0.0	1.19x	1.2x	11.1%	8.8%	2.3%
2004	355.0	331.3	541.4	0.3	0.0	0.3	1.63x	1.6x	20.5%	7.5%	13.0%
2005	40.0	36.0	16.0	0.0	0.0	0.0	0.45x	0.4x	(10.4%)	7.6%	(18.0%)
2006	625.0	834.4	826.7	615.7	2.5	618.2	1.73x	1.0x	5.7%	7.1%	(1.4%)
2007	697.5	850.3	880.0	535.7	26.5	562.2	1.66x	1.0x	5.6%	7.3%	(1.7%)
2008	323.4	415.7	330.4	276.3	8.6	284.9	1.46x	0.8x	5.8%	8.3%	(2.5%)
2009	140.0	147.9	172.9	28.4	8.1	36.5	1.36x	1.2x	8.8%	9.3%	(0.5%)
2010	162.0	161.6	79.8	181.0	0.0	181.0	1.61x	0.5x	9.5%	7.3%	2.2%
2011	110.0	116.6	167.3	6.7	22.7	29.4	1.49x	1.4x	17.0%	8.0%	8.9%
2012	340.0	371.0	599.9	60.4	70.4	130.8	1.78x	1.6x	16.4%	7.5%	8.8%
2013	484.0	463.2	451.3	138.3	65.3	203.6	1.27x	1.0x	7.1%	7.0%	0.2%
2014	218.0	214.6	214.7	115.6	40.5	156.1	1.54x	1.0x	11.0%	6.9%	4.1%
2015	383.4	407.0	306.8	317.6	41.7	359.3	1.53x	0.8x	11.6%	7.2%	4.4%
2016	535.3	567.6	319.5	525.4	30.8	556.3	1.49x	0.6x	11.6%	6.3%	5.3%
2017	459.6	518.2	275.3	602.6	19.4	622.0	1.69x	0.5x	14.7%	6.2%	8.5%
2018	330.7	322.4	186.0	229.6	52.1	281.7	1.29x	0.6x	13.7%	4.5%	9.2%
2019	1,023.3	838.5	204.8	834.9	337.2	1,172.2	1.24x	0.2x	12.3%	3.1%	9.3%
2020	793.4	615.7	208.2	544.0	209.9	753.9	1.22x	0.3x	15.2%	1.4%	13.9%
2021	1,474.1	684.1	46.0	679.4	820.5	1,499.9	1.06x	0.1x	6.2%	(3.6%)	9.8%
2022	975.0	68.5	5.0	53.4	911.5	964.9	0.85x	0.1x	NM	16.3%	NM
2023	135.0	0.0	0.0	0.0	135.0	135.0	-	-	NM	NM	NM
TOTAL	9,619.8	7,978.2	5,848.4	5,745.4	2,802.7	8,548.2	1.45x	0.7x	8.2%	7.0%	1.2%

PERFORMANCE BY VINTAGE YEAR (CONT.)



The PME Spread is calculated as the IRR minus the blended PME. Performance of funds that are less than one year old are not meaningful. Note that Russell 3000 and Barclays Capital Aggregate Bond Index data are continuously updated and are therefore subject to change. Performance of funds that are less than one year old are not meaningful and therefore left blank. Blended PME benchmark comprised of Russell 3000 and Barclays Capital Aggregate Bond Index at a 50/50 ratio.

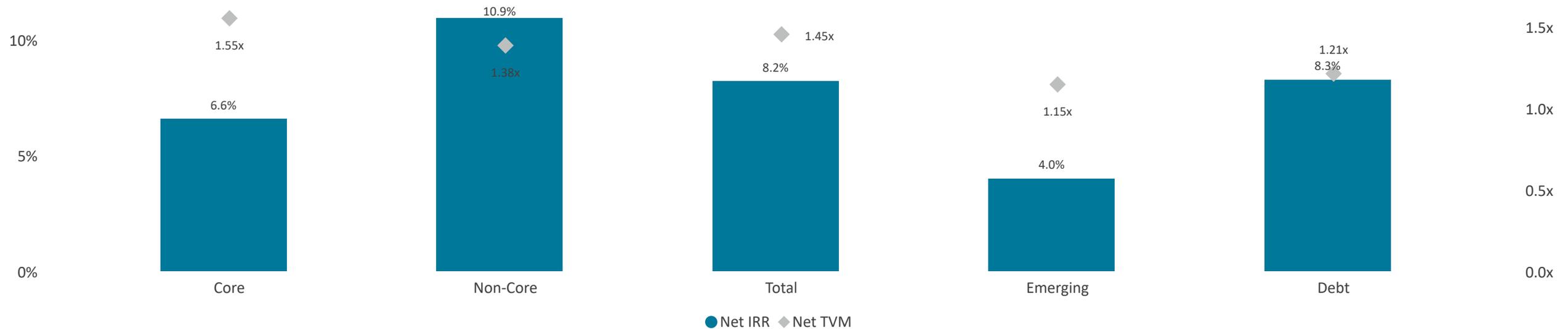
PERFORMANCE BY STRATEGY¹

The following table illustrates the Portfolio's since inception investment performance by strategy and sub-strategy as of March 31, 2023.

As of March 31, 2023. In USD millions.

Strategy	# of Inv	Commitment	Contributions	Distributions	NAV	Unfunded	Exposure	Net TVM	Net IRR	PME	PME Spread	Leverage
Core	34	3,005.6	3,266.3	1,778.1	3,290.2	310.5	3,600.7	1.55x	6.6%	6.0%	0.6%	36.4%
Non-Core	83	6,614.1	4,711.9	4,070.4	2,455.2	2,492.2	4,947.4	1.38x	10.9%	8.4%	2.6%	46.0%
Total	117	9,619.8	7,978.2	5,848.4	5,745.4	2,802.7	8,548.2	1.45x	8.2%	7.0%	1.2%	40.5%
Emerging	7	408.0	321.8	191.9	176.8	122.0	298.8	1.15x	4.0%	N/A	N/A	6.0%
Debt	11	860.6	763.9	426.6	499.2	136.6	635.8	1.21x	8.3%	N/A	N/A	26.8%

The following chart illustrates the IRR and TVM of the Portfolio's various strategies and sub-strategies side by side. Both metrics are important to measure investment returns. IRR takes into account the time value of money and is generally favored by investors that are more yield driven over shorter investment horizons. The TVM equity multiple is the ratio of distributions plus current market value over the amount of capital contributed.



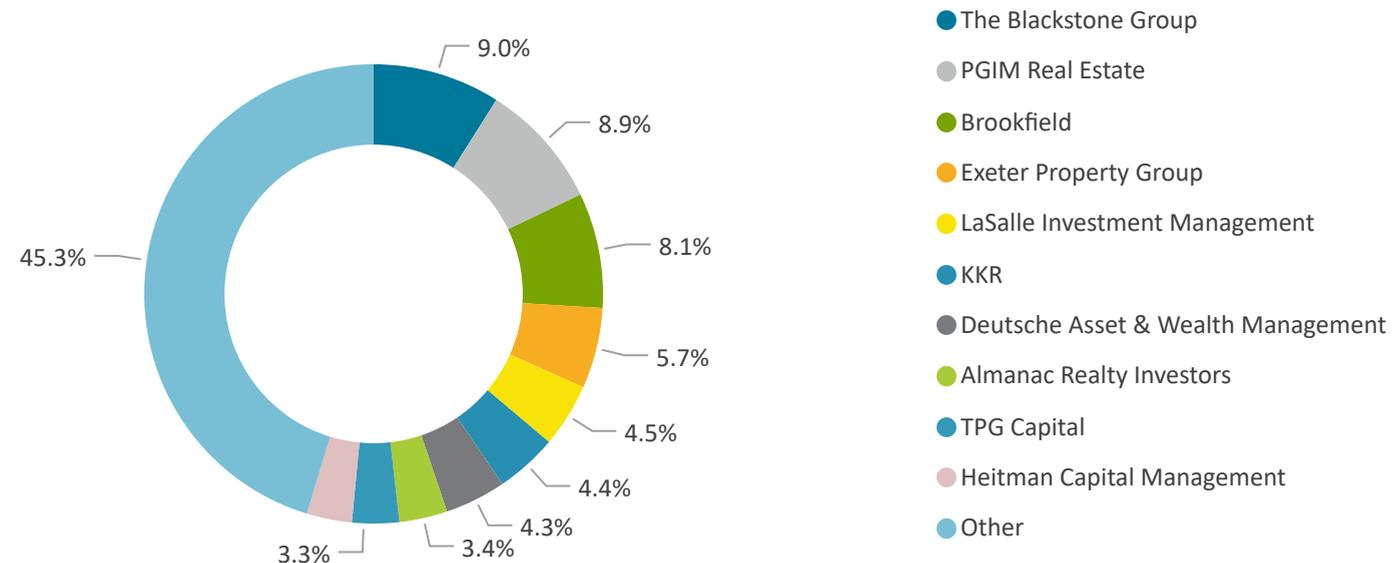
¹Russell 3000 and Barclays Capital Aggregate Bond Index are blended at the ratios of 40/60, 60/40 and 50/50 for the core, non-core and total portfolio PMEs, respectively.

TOP 10 - MANAGER HOLDINGS

As of the first quarter of 2023, the Portfolio is well diversified by manager, with 49 active managers and US\$8.5 billion total exposure.

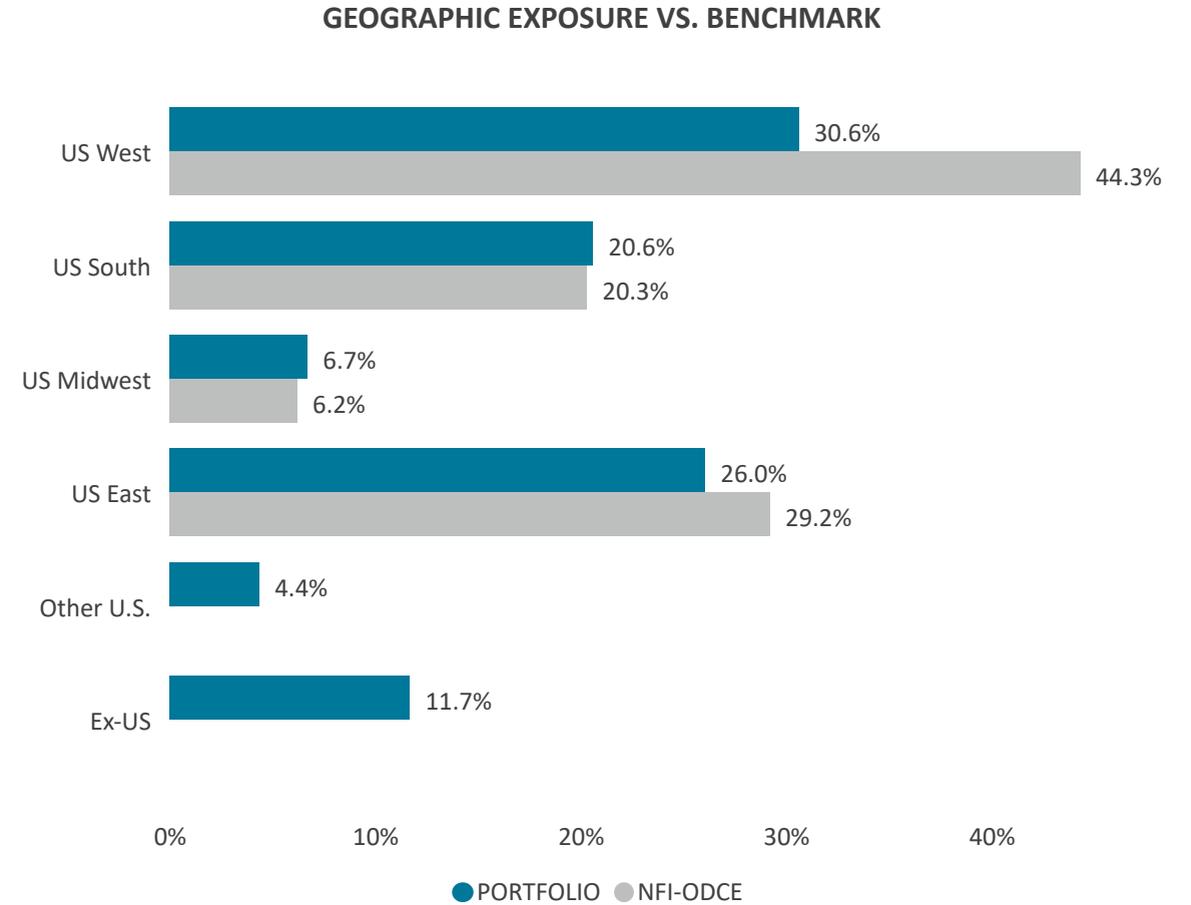
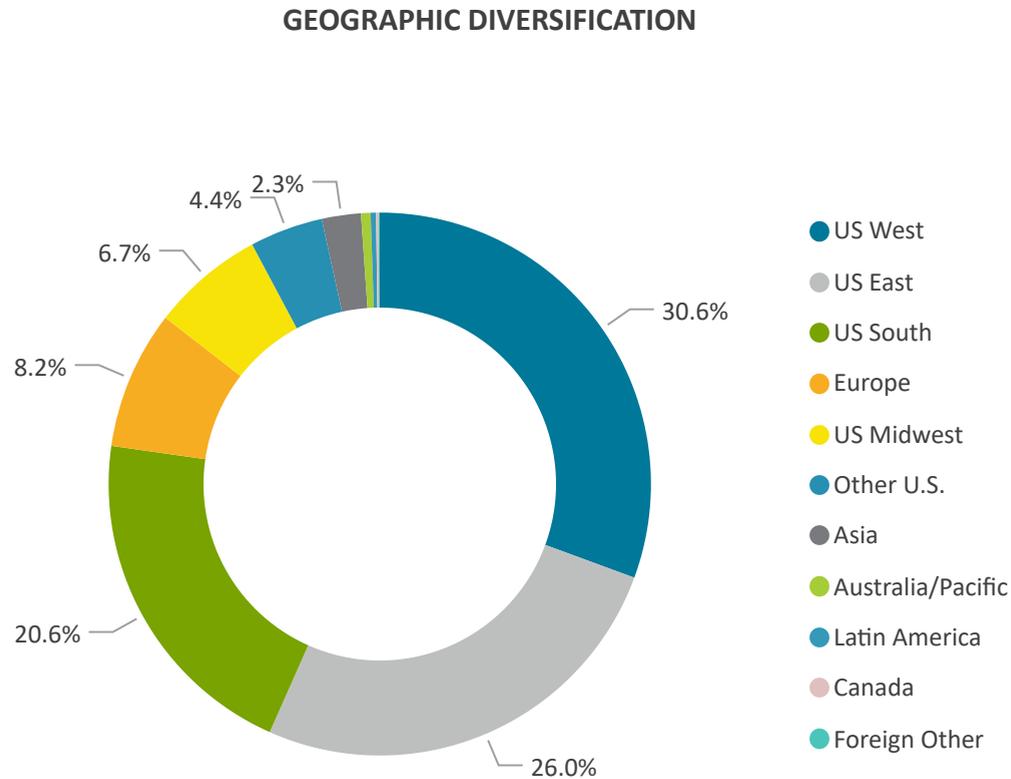
Manager	No. of Investments	Commitment	Contributions	Distributions	NAV	Unfunded	Exposure	% of Portfolio	Net IRR	Net TVM	Net DPI
The Blackstone Group	10	1,120.0	1,009.3	1,186.1	426.4	341.8	768.2	9.0%	13.9%	1.60x	1.2x
PGIM Real Estate	5	426.2	492.5	282.2	696.3	63.7	759.9	8.9%	7.2%	1.99x	0.6x
Brookfield	4	613.0	547.8	304.0	513.2	179.3	692.5	8.1%	14.7%	1.49x	0.6x
Exeter Property Group	6	456.1	188.3	77.5	217.2	267.7	485.0	5.7%	21.8%	1.57x	0.4x
LaSalle Investment Management	3	334.0	226.9	43.0	278.2	106.8	385.0	4.5%	8.9%	1.42x	0.2x
KKR	5	557.0	432.7	290.5	255.7	117.4	373.0	4.4%	12.1%	1.26x	0.7x
Deutsche Asset & Wealth Management	3	364.5	395.3	133.2	367.8	0.0	367.8	4.3%	3.4%	1.27x	0.3x
Almanac Realty Investors	6	305.0	148.8	76.9	117.9	171.5	289.4	3.4%	12.0%	1.31x	0.5x
TPG Capital	2	285.0	73.1	0.1	70.3	212.5	282.9	3.3%	(4.6%)	0.96x	0.0x
Heitman Capital Management	2	242.0	356.7	306.9	272.6	0.0	272.6	3.2%	7.5%	1.62x	0.9x
TOTAL - Top 10 Managers	46	4,702.7	3,871.2	2,700.5	3,215.6	1,460.7	4,676.2	54.7%	8.9%	1.53x	0.7x

As of March 31, 2023. In USD millions.



PORTFOLIO UNDERLYING HOLDINGS DIVERSIFICATION - GEOGRAPHY

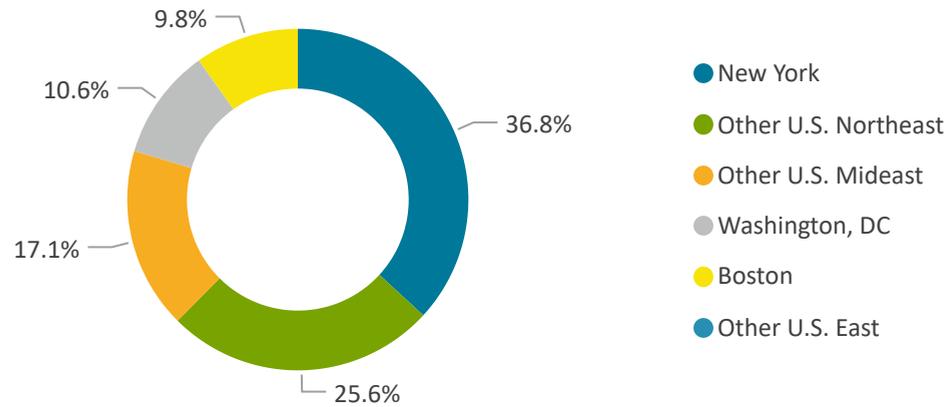
The following chart illustrates the portfolio's current exposure vs. benchmarks as of March 31, 2023.



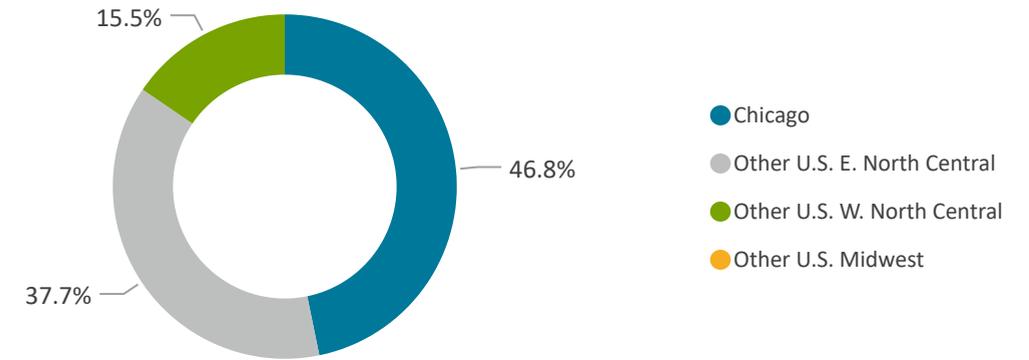
PORTFOLIO UNDERLYING HOLDINGS DIVERSIFICATION - GEOGRAPHY DETAILED

The following chart illustrates the portfolio's current exposure as of March 31, 2023.

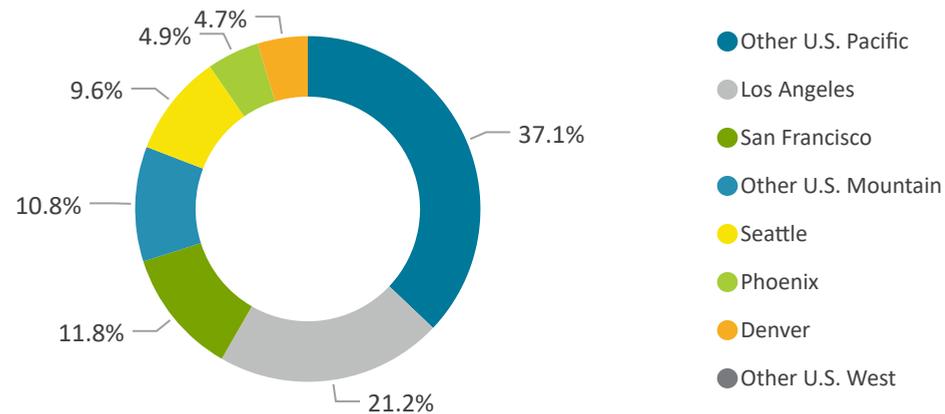
U.S. EAST EXPOSURE DETAIL 26.0%



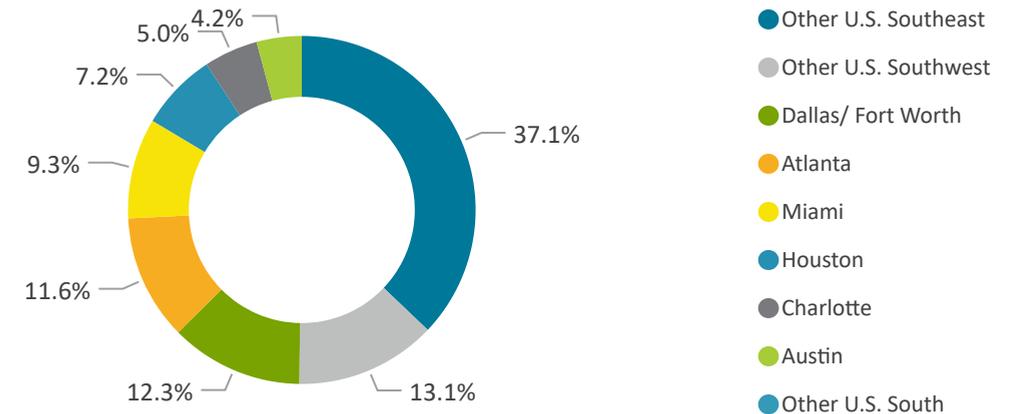
U.S. MIDWEST EXPOSURE DETAIL 6.7%



U.S. WEST EXPOSURE DETAIL 30.6%

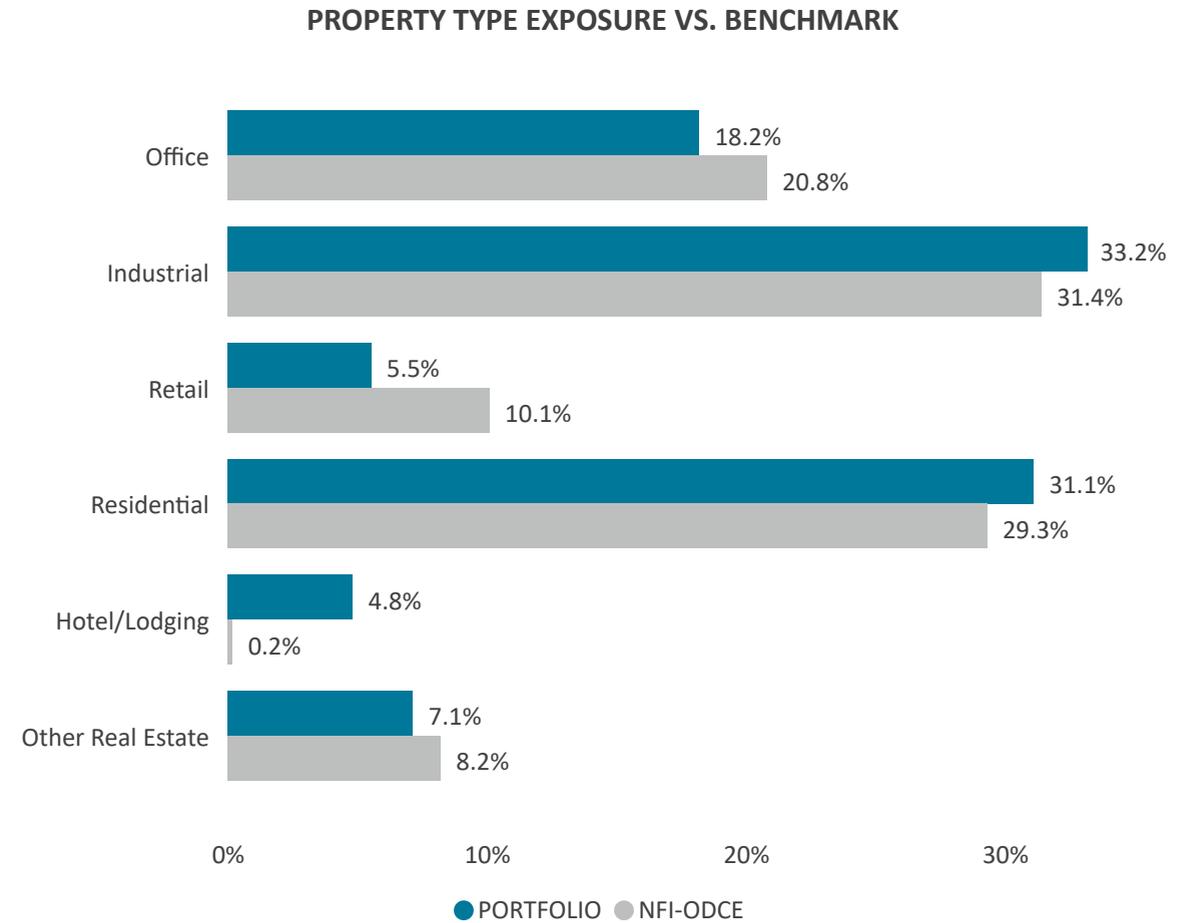
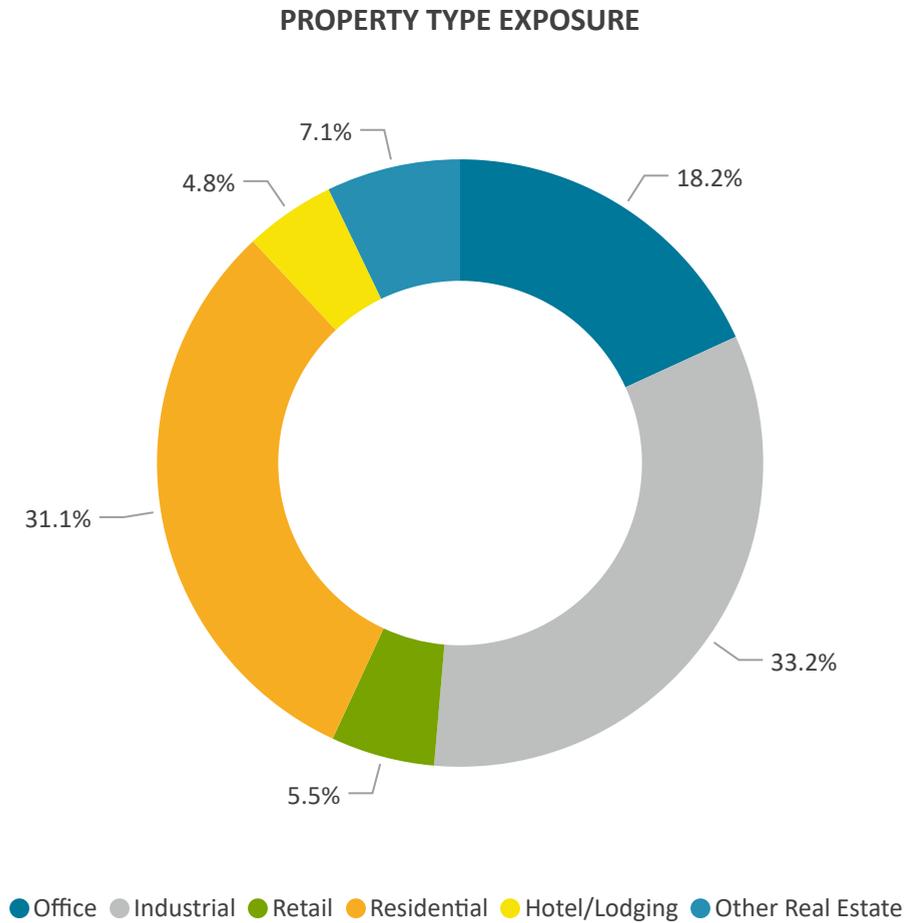


U.S. SOUTH EXPOSURE DETAIL 20.6%



PORTFOLIO UNDERLYING HOLDINGS DIVERSIFICATION - PROPERTY TYPE

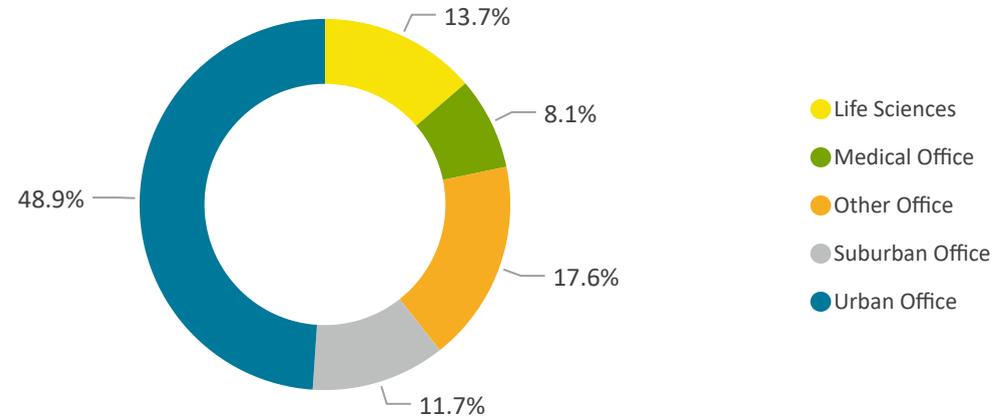
The following chart illustrates the portfolio's current exposure vs. benchmarks as of March 31, 2023.



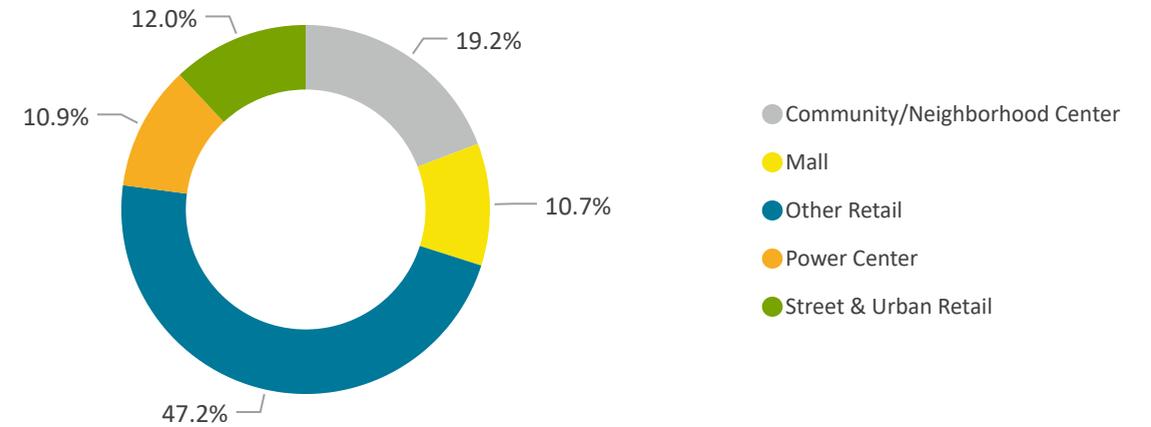
PORTFOLIO UNDERLYING HOLDINGS DIVERSIFICATION - PROPERTY TYPE DETAILED

The following chart illustrates the portfolio's current exposure as of March 31, 2023.

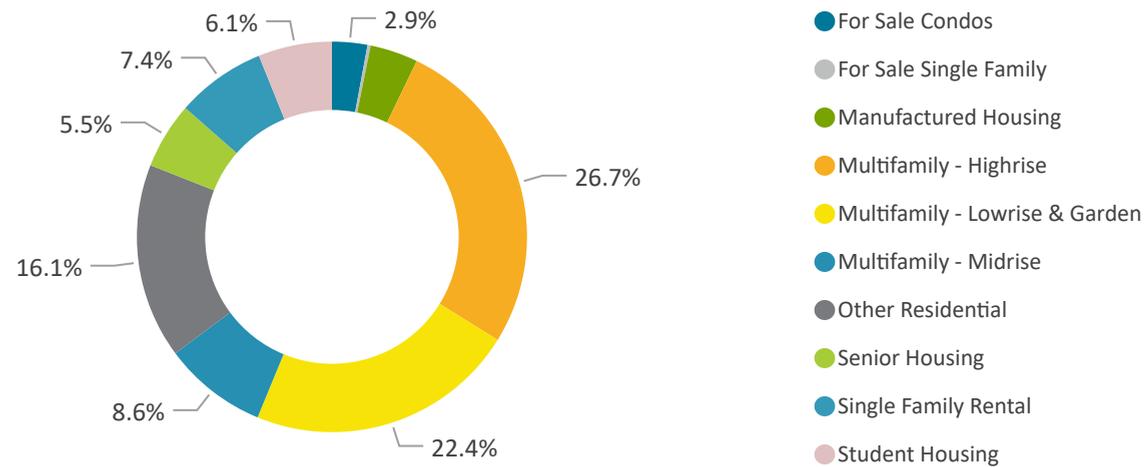
OFFICE EXPOSURE - PROPERTY SUB-TYPE DETAIL 18.2%



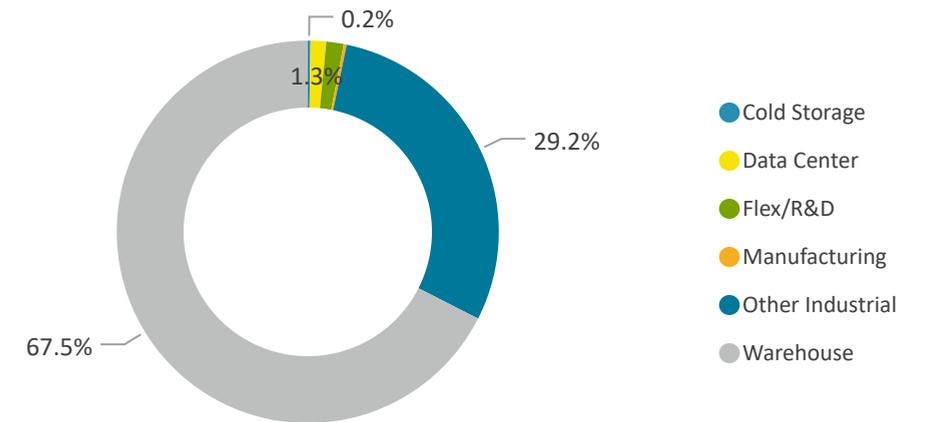
RETAIL EXPOSURE - PROPERTY SUB-TYPE DETAIL 5.5%



RESIDENTIAL EXPOSURE - PROPERTY SUB-TYPE DETAIL 31.1%



INDUSTRIAL EXPOSURE - PROPERTY SUB-TYPE DETAIL 33.2%



ACTIVE CORE PORTFOLIO PERFORMANCE

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
JP Morgan Strategic Property Fund	2006	12/5/2006	\$136.0	\$198.9	\$325.6	\$55.0	\$0.0	\$55.0	1.6x	1.9x	6.5%
PRISA	2006	9/29/2006	\$86.0	\$92.7	\$51.7	\$142.6	\$0.0	\$142.6	0.6x	2.1x	5.3%
Prologis Targeted US Logistics Fund	2006	10/1/2006	\$40.0	\$50.5	\$19.4	\$101.7	\$0.0	\$101.7	0.4x	2.4x	8.6%
RREEF America REIT II	2006	10/2/2006	\$162.0	\$189.5	\$78.8	\$234.1	\$0.0	\$234.1	0.4x	1.7x	5.9%
UBS Trumbull Property Fund	2006	9/28/2006	\$156.0	\$253.1	\$313.1	\$82.2	\$0.0	\$82.2	1.2x	1.6x	5.6%
Heitman America Real Estate Trust, L.P.	2007	3/29/2007	\$115.0	\$207.8	\$285.0	\$133.9	\$0.0	\$133.9	1.4x	2.0x	7.8%
JP Morgan Special Situation Property Fund	2007	1/5/2007	\$90.0	\$131.6	\$77.6	\$142.7	\$0.0	\$142.7	0.6x	1.7x	4.8%
PRISA II	2007	6/29/2007	\$141.5	\$150.9	\$75.8	\$252.0	\$0.0	\$252.0	0.5x	2.2x	6.2%
LaSalle Property Fund	2010	7/1/2010	\$132.0	\$131.6	\$39.4	\$181.0	\$0.0	\$181.0	0.3x	1.7x	9.2%
NYC Asset Investor #2	2013	7/9/2013	\$75.0	\$78.7	\$32.4	\$46.4	\$0.0	\$46.4	0.4x	1.0x	0.0%
MetLife Core Property Fund	2014	7/1/2014	\$50.0	\$50.0	\$20.2	\$77.6	\$0.0	\$77.6	0.4x	2.0x	9.6%
Almanac Realty Securities VII	2015	4/24/2015	\$65.0	\$65.3	\$52.5	\$38.6	\$9.5	\$48.1	0.8x	1.4x	11.6%
Almanac Realty Securities VII (Sidecar IV)	2015	12/9/2015	\$20.0	\$16.5	\$12.0	\$11.6	\$4.3	\$15.9	0.7x	1.4x	12.4%
USAA Eagle Real Estate Fund	2015	12/1/2015	\$90.0	\$99.3	\$30.5	\$108.8	\$0.0	\$108.8	0.3x	1.4x	6.8%

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ACTIVE CORE PORTFOLIO PERFORMANCE (CONT.)

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Artemis Co-Investment	2016	2/24/2016	\$53.0	\$62.0	\$81.2	\$17.1	\$3.9	\$21.0	1.3x	1.6x	16.6%
Brookfield Premier Real Estate Partners	2016	11/22/2016	\$169.0	\$207.8	\$38.8	\$267.8	\$0.0	\$267.8	0.2x	1.5x	10.8%
Exeter Core Industrial Club Fund II	2016	5/20/2016	\$28.0	\$27.3	\$12.0	\$52.7	\$0.7	\$53.4	0.4x	2.4x	20.9%
Jamestown Premier Property Fund	2016	2/4/2016	\$48.7	\$57.4	\$23.3	\$25.2	(\$0.0)	\$25.2	0.4x	0.8x	(4.5%)
Carlyle Property Investors	2017	7/3/2017	\$91.0	\$117.1	\$26.1	\$170.8	\$0.0	\$170.8	0.2x	1.7x	12.2%
Lion Industrial Trust	2017	1/3/2017	\$90.0	\$127.4	\$29.7	\$258.6	\$0.0	\$258.6	0.2x	2.3x	19.9%
Almanac Realty Securities VIII	2018	12/21/2018	\$51.0	\$31.0	\$7.1	\$30.6	\$23.7	\$54.3	0.2x	1.2x	12.1%
Almanac Realty Securities VIII (Sidecar II)	2018	12/21/2018	\$34.0	\$21.1	\$5.3	\$23.0	\$13.8	\$36.8	0.3x	1.3x	18.4%
Heitman Core Real Estate Debt Income Trust	2018	11/7/2018	\$127.0	\$148.9	\$21.9	\$138.7	\$0.0	\$138.7	0.1x	1.1x	3.5%
Artemis Income and Growth Fund	2019	10/18/2019	\$61.0	\$48.7	\$12.8	\$37.2	\$20.2	\$57.4	0.3x	1.0x	1.8%
Harrison Street Core Property Fund	2019	10/4/2019	\$90.0	\$106.6	\$13.4	\$118.5	\$0.0	\$118.5	0.1x	1.2x	7.2%
Harrison Street Core Property Fund Co-Investment	2019	5/13/2019	\$45.0	\$44.0	\$3.8	\$57.3	\$1.7	\$58.9	0.1x	1.4x	13.1%
Cortland Growth and Income, L.P.	2020	7/1/2020	\$107.0	\$122.2	\$15.2	\$148.1	\$0.0	\$148.1	0.1x	1.3x	12.9%
Exeter Core Industrial Fund III	2020	2/19/2020	\$72.1	\$70.9	\$7.8	\$75.9	\$1.2	\$77.1	0.1x	1.2x	9.7%
LaSalle Centre Street GPS Co-Investment Program - Core	2021	8/17/2021	\$80.8	\$49.9	\$2.1	\$51.5	\$31.1	\$82.5	0.0x	1.1x	6.6%
RREEF Core Plus Industrial Fund	2021	4/5/2021	\$112.5	\$115.7	\$3.2	\$133.7	\$0.0	\$133.7	0.0x	1.2x	13.8%
TPG Real Estate Thematic Advantage Core-Plus JV IV, L.P.	2021	3/29/2022	\$135.0	\$63.6	\$0.1	\$63.5	\$72.0	\$135.5	0.0x	1.0x	(0.2%)
FOT Exeter Industrial Core Plus Fund IV	2022	9/30/2022	\$142.0	\$13.7	\$0.0	\$12.0	\$128.3	\$140.3	0.0x	0.9x	NM
Total Active Non-Core Investments			\$2,895.6	\$3,151.7	\$1,718.0	\$3,290.2	\$310.5	\$3,600.7	0.5x	1.6x	7.1%

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ACTIVE NON-CORE PORTFOLIO PERFORMANCE

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Blackstone Real Estate Partners IV L.P.	2004	5/14/2004	\$30.0	\$38.4	\$54.8	\$0.3	\$0.0	\$0.3	1.4x	1.4x	10.3%
Apollo Real Estate Investment Fund V	2006	6/15/2006	\$25.0	\$25.0	\$29.1	\$0.0	\$2.5	\$2.5	1.2x	1.2x	1.9%
American Value Partners Fund I	2007	10/18/2007	\$55.0	\$39.3	\$42.3	\$0.5	\$15.7	\$16.1	1.1x	1.1x	1.8%
Blackstone Real Estate Partners VI L.P.	2007	7/28/2006	\$110.0	\$123.5	\$245.2	\$1.7	\$5.6	\$7.3	2.0x	2.0x	13.2%
Carlyle Realty Partners V, L.P.	2007	8/27/2007	\$17.0	\$25.9	\$38.3	\$0.0	\$1.4	\$1.5	1.5x	1.5x	8.7%
Metropolitan Workforce Housing Fund	2007	7/12/2007	\$14.0	\$14.0	\$16.7	\$0.4	\$0.0	\$0.4	1.2x	1.2x	4.0%
Westbrook Real Estate Fund VII, L.P.	2007	12/3/2007	\$40.0	\$44.1	\$45.3	\$4.4	\$3.8	\$8.2	1.0x	1.1x	2.0%
Ares European Real Estate Fund III	2008	5/20/2008	\$30.0	\$30.5	\$33.6	\$0.1	\$0.0	\$0.1	1.1x	1.1x	2.6%
Blackstone Real Estate Partners Europe III - USD	2008	10/24/2008	\$50.0	\$53.3	\$72.7	\$3.8	\$5.6	\$9.5	1.4x	1.4x	10.0%
PRISA III	2008	9/30/2008	\$50.0	\$162.2	\$101.8	\$254.5	(\$0.0)	\$254.5	0.6x	2.2x	12.0%
Silverpeak Legacy Partners III	2008	6/4/2008	\$50.0	\$23.7	\$5.8	\$1.1	\$0.0	\$1.1	0.2x	0.3x	(12.0%)
Stockbridge Real Estate III	2008	9/9/2008	\$27.0	\$27.0	\$16.8	\$16.3	\$0.0	\$16.3	0.6x	1.2x	2.3%
Thor Urban Property Fund II	2008	10/30/2008	\$40.0	\$54.8	\$57.0	\$0.6	\$3.0	\$3.5	1.0x	1.1x	1.7%
Walton Street Real Estate Fund VI	2009	4/27/2009	\$50.0	\$44.3	\$50.7	\$21.8	\$3.8	\$25.6	1.1x	1.6x	8.4%
Westbrook Real Estate Fund VIII, L.P.	2009	12/28/2009	\$50.0	\$59.9	\$69.0	\$6.7	\$4.3	\$11.0	1.2x	1.3x	9.4%
Carlyle Realty Partners VI, L.P.	2011	9/28/2011	\$70.0	\$76.5	\$108.9	\$6.1	\$22.7	\$28.8	1.4x	1.5x	19.8%
H2 Special Opportunities Fund II	2011	2/14/2011	\$40.0	\$40.0	\$58.4	\$0.7	\$0.0	\$0.7	1.5x	1.5x	13.2%
Blackstone Real Estate Partners VII L.P.	2012	4/13/2012	\$170.0	\$218.4	\$337.1	\$32.1	\$18.8	\$50.9	1.5x	1.7x	15.4%
Brookfield Strategic Real Estate Partners	2012	9/20/2012	\$100.0	\$123.3	\$214.8	\$23.1	\$10.9	\$33.9	1.7x	1.9x	18.3%
Taconic New York City Investment Fund	2012	7/5/2012	\$70.0	\$29.3	\$48.0	\$5.2	\$40.7	\$45.9	1.6x	1.8x	15.5%

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ACTIVE NON-CORE PORTFOLIO PERFORMANCE (CONT.)

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Blackstone Real Estate Partners Europe IV L.P. - USD	2013	12/23/2013	\$169.0	\$169.6	\$214.5	\$27.3	\$31.3	\$58.6	1.3x	1.4x	11.4%
Lone Star Real Estate Fund III, L.P.	2013	2/28/2014	\$100.0	\$95.6	\$128.7	\$0.4	\$6.3	\$6.7	1.3x	1.4x	14.1%
NYC Asset Investor #1	2013	6/25/2013	\$50.0	\$64.6	\$37.3	\$31.1	\$14.3	\$45.3	0.6x	1.1x	1.1%
NYC Asset Investor #3	2013	9/20/2013	\$50.0	\$36.5	\$10.1	\$33.1	\$13.5	\$46.6	0.3x	1.2x	3.1%
Carlyle Realty Partners VII, L.P.	2014	7/1/2014	\$80.0	\$74.3	\$89.4	\$19.6	\$38.4	\$58.0	1.2x	1.5x	12.7%
DivcoWest Fund IV	2014	1/15/2014	\$23.0	\$22.8	\$37.7	\$1.3	\$2.1	\$3.4	1.7x	1.7x	25.1%
H2 Special Opportunities III	2014	12/29/2014	\$65.0	\$67.5	\$67.4	\$17.2	\$0.0	\$17.2	1.0x	1.3x	7.3%
Blackstone Real Estate Partners VIII L.P.	2015	8/18/2015	\$151.0	\$172.5	\$178.3	\$115.3	\$21.4	\$136.7	1.0x	1.7x	16.4%
European Property Investors Special Opportunities 4 LP	2015	12/18/2015	\$49.4	\$45.0	\$18.6	\$43.4	\$6.5	\$49.9	0.4x	1.4x	7.9%
DivcoWest Fund V	2016	12/21/2016	\$60.0	\$47.9	\$17.5	\$41.7	\$12.1	\$53.8	0.4x	1.2x	5.8%
H2 Special Opportunities IV	2016	11/15/2016	\$91.0	\$91.7	\$21.4	\$90.3	\$0.0	\$90.3	0.2x	1.2x	6.2%
PW Real Estate Fund III	2016	10/7/2016	\$49.6	\$38.5	\$94.6	\$18.3	\$11.1	\$29.4	2.5x	2.9x	30.7%
Westbrook Real Estate Fund X	2016	7/18/2016	\$36.0	\$35.0	\$30.7	\$12.3	\$2.9	\$15.2	0.9x	1.2x	9.3%

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ACTIVE NON-CORE PORTFOLIO PERFORMANCE (CONT.)

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Basis Investment Group Real Estate Fund I	2017	11/16/2017	\$17.0	\$17.9	\$11.9	\$11.6	\$2.5	\$14.1	0.7x	1.3x	11.5%
DRA Growth and Income Fund IX	2017	3/9/2017	\$49.0	\$53.9	\$51.0	\$36.5	\$4.2	\$40.8	0.9x	1.6x	18.0%
Exeter Industrial Value Fund IV, L.P.	2017	9/20/2017	\$30.0	\$28.2	\$57.7	\$4.4	\$1.7	\$6.1	2.0x	2.2x	30.7%
NYCRS-KKR CMBS Retention Partners	2017	9/27/2017	\$122.0	\$110.7	\$47.9	\$98.9	\$13.2	\$112.1	0.4x	1.3x	7.3%
Pramerica Real Estate Capital VI	2017	4/20/2017	\$60.6	\$62.9	\$50.9	\$21.8	(\$2.2)	\$19.6	0.8x	1.2x	7.5%
KKR Real Estate Partners Americas II	2018	2/9/2018	\$118.7	\$121.5	\$151.7	\$37.3	\$14.5	\$51.9	1.2x	1.6x	24.9%
Aermont Capital Real Estate Fund IV	2019	4/18/2019	\$73.3	\$52.2	\$0.0	\$43.1	\$21.1	\$64.2	0.0x	0.8x	(9.7%)
Blackstone Real Estate Partners Europe VI L.P.	2019	11/20/2019	\$99.0	\$62.5	\$28.6	\$51.1	\$54.1	\$105.2	0.5x	1.3x	17.7%
Blackstone Real Estate Partners IX L.P.	2019	9/23/2019	\$166.0	\$170.5	\$54.9	\$194.6	\$30.6	\$225.1	0.3x	1.5x	27.1%
Brookfield Strategic Real Estate Partners III, L.P.	2019	4/12/2019	\$170.0	\$153.3	\$47.3	\$155.6	\$54.8	\$210.4	0.3x	1.3x	13.6%
Grosvenor Real Estate Emerging Manager SMA	2019	5/19/2020	\$236.0	\$157.0	\$22.2	\$147.2	\$99.9	\$247.1	0.1x	1.1x	6.8%
Westbrook Real Estate Fund XI	2019	12/22/2020	\$83.0	\$43.7	\$21.8	\$30.3	\$54.9	\$85.2	0.5x	1.2x	21.5%

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ACTIVE NON-CORE PORTFOLIO PERFORMANCE (CONT.)

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Aermont Capital Real Estate Fund IV	2019	4/18/2019	\$73.3	\$52.2	\$0.0	\$43.1	\$21.1	\$64.2	0.0x	0.8x	(9.7%)
Brookfield Strategic Real Estate Partners III, L.P.	2019	4/12/2019	\$170.0	\$153.3	\$47.3	\$155.6	\$54.8	\$210.4	0.3x	1.3x	13.6%
Westbrook Real Estate Fund XI	2019	12/22/2020	\$83.0	\$43.7	\$21.8	\$30.3	\$54.9	\$85.2	0.5x	1.2x	21.5%
DivcoWest Fund VI	2020	11/6/2020	\$82.0	\$41.5	\$1.3	\$39.2	\$41.1	\$80.3	0.0x	1.0x	(2.1%)
DRA Growth and Income Fund X	2020	3/25/2020	\$59.0	\$53.6	\$16.2	\$53.3	\$15.6	\$68.9	0.3x	1.3x	26.3%
ElmTree U.S. Net Lease Fund IV, L.P.	2020	7/16/2020	\$68.0	\$45.7	\$31.0	\$32.2	\$22.9	\$55.1	0.7x	1.4x	28.9%
Exeter Industrial Value Fund V, L.P.	2020	10/23/2020	\$49.0	\$48.2	\$0.0	\$72.3	\$0.8	\$73.0	0.0x	1.5x	31.7%
GreenOak Asia III	2020	4/16/2020	\$87.0	\$90.5	\$49.9	\$46.6	\$29.9	\$76.6	0.6x	1.1x	8.9%
KKR RE Europe II	2020	9/1/2021	\$83.3	\$60.5	\$18.8	\$42.7	\$31.9	\$74.6	0.3x	1.0x	1.4%
KKR Real Estate Securities Dislocation Opportunity Co-Investment Strategy	2020	10/9/2020	\$98.0	\$58.7	\$66.0	\$8.4	\$0.6	\$9.0	1.1x	1.3x	35.4%
Pramerica Real Estate Capital VII (USD)	2020	1/28/2021	\$88.0	\$23.7	\$2.0	\$25.3	\$65.9	\$91.2	0.1x	1.2x	14.5%

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ACTIVE NON-CORE PORTFOLIO PERFORMANCE (CONT.)

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Aermont Capital Real Estate Fund V	2021		\$113.0	\$0.0	\$0.0	(\$1.4)	\$113.0	\$111.6	0.0x	0.0x	NM
Almanac Realty Securities IX Sidecar II	2021	11/10/2022	\$45.0	\$3.1	\$0.0	\$3.3	\$41.9	\$45.2	0.0x	1.1x	NM
Almanac Realty Securities IX, L.P.	2021	6/13/2022	\$90.0	\$11.8	\$0.0	\$10.8	\$78.2	\$89.1	0.0x	0.9x	NM
Basis Investment Group Real Estate Fund II	2021	6/30/2021	\$48.0	\$22.5	\$6.7	\$16.8	\$31.1	\$47.9	0.3x	1.0x	5.6%
Brookfield Strategic Real Estate Partners IV	2021	8/11/2022	\$174.0	\$63.4	\$3.1	\$66.8	\$113.7	\$180.4	0.0x	1.1x	NM
Cerberus Institutional Real Estate Partners V SMA	2021	7/19/2021	\$89.0	\$58.4	\$0.0	\$70.5	\$30.6	\$101.1	0.0x	1.2x	19.2%
KKR Real Estate Partners Americas III SCSp	2021	11/23/2021	\$135.0	\$81.3	\$6.0	\$68.3	\$57.2	\$125.5	0.1x	0.9x	(8.6%)
LaSalle Centre Street GPS Co-investment Program - Non-Core	2021	9/28/2021	\$121.2	\$45.5	\$1.5	\$45.7	\$75.7	\$121.5	0.0x	1.0x	3.6%
LBA Logistics Value Fund IX	2021	2/22/2022	\$81.0	\$21.8	\$0.0	\$19.7	\$59.2	\$78.9	0.0x	0.9x	(12.7%)
Mesirow Financial Real Estate Value Fund IV	2021	6/10/2021	\$34.5	\$14.7	\$0.5	\$16.0	\$20.5	\$36.5	0.0x	1.1x	13.0%
NYC Hudson Multifamily Green Fund	2021	7/1/2021	\$113.1	\$50.1	\$13.4	\$36.8	\$76.4	\$113.2	0.3x	1.0x	0.3%
Rialto Real Estate Fund IV - Debt, LP	2021	1/14/2021	\$102.0	\$82.4	\$9.3	\$77.4	\$19.9	\$97.4	0.1x	1.1x	5.1%

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ACTIVE NON-CORE PORTFOLIO PERFORMANCE (CONT.)

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR	
Artemis Real Estate Partners Healthcare Fund II	2022	7/15/2022	\$98.0	\$18.8	\$5.0	\$12.1	\$84.2	\$96.3	0.3x	0.9x	NM	
Blackstone Real Estate Partners X, LP	2022	3/24/2023	\$175.0	\$0.7	\$0.0	\$0.2	\$174.3	\$174.6	0.0x	0.3x	NM	
Cerberus Institutional Real Estate Partners VI SMA	2022	11/22/2022	\$140.0	\$25.9	\$0.0	\$22.7	\$114.1	\$136.9	0.0x	0.9x	NM	
Crow Holdings Realty Partners X	2022		\$135.0	\$0.0	\$0.0	(\$0.5)	\$135.0	\$134.5	0.0x	0.0x	NM	
EQT Exeter Industrial Value Fund VI, LP	2022		\$135.0	\$0.0	\$0.0	\$0.0	\$135.0	\$135.0	0.0x	0.0x	NM	
TPG Real Estate Partners IV, L.P.	2022	12/22/2022	\$150.0	\$9.5	\$0.0	\$6.9	\$140.5	\$147.4	0.0x	0.7x	NM	
Waterton Residential Property Venture XV	2023		\$135.0	\$0.0	\$0.0	\$0.0	\$135.0	\$135.0	0.0x	0.0x	NM	
Total: Active Non-Core Investments			\$6,014.8	\$4,181.5	\$3,369.2	\$2,455.2	\$2,492.2	\$4,947.4	0.8x	1.4x	10.9%	
Total Active Investments				COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
NYC ERS - Real Estate			\$8,910.4	\$7,333.2	\$5,087.2	\$5,745.4	\$2,802.7	\$8,548.2	0.7x	1.5x	8.4%	

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FOOTNOTES

[Executive Summary - pg. 3](#)

Number of Managers and Investments include active funds. Liquidated funds are not included. Committed Capital represents original commitments to partnership investments. Unfunded Commitment represents the aggregate remaining commitments to partnership investments. Total Exposure represents the sum of Market Value and Unfunded Commitment. DPI, or Distributed to Paid-In Multiple, is a performance metric that measures distributions received relative to capital interest. DPI is calculated as Distributions divided by Contributions. TVM, or Total Value Multiple, is a performance metric that measures total value created by the Portfolio relative to Contributions, without consideration for time. TVM is calculated as Total Value, which is comprised of Market Value plus Distributions, divided by Contributions. -IRR, or Internal Rate of Return, is a performance metric that is calculated based on the Portfolio's daily cash flows and market value as of quarter end. IRR is net of fund manager's fees, expenses, and carried interest. TVM and IRR Net of fees represent TVM and IRR net of fees. DPI, TVM and IRR are since inceptions values up until the current quarter.

Infrastructure Quarterly Report (Public):

QUARTERLY MONITORING REPORT

For the period ended March 31, 2023

Report Prepared For:

New York City Employees' Retirement System - Infrastructure



IMPORTANT INFORMATION

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All data is as of March 31, 2023 unless otherwise noted.

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. ACTUAL PERFORMANCE MAY VARY.

PERFORMANCE SUMMARY

The New York City Employees' Retirement System ("NYCERS") established the Infrastructure Program (the "Program") in December of 2012 on behalf of its beneficiaries to participate in attractive long-term investment opportunities and to provide diversification to its overall pension investment portfolio.

The inclusion of infrastructure in the NYCERS pension portfolio allows for global investments in facilities or assets that provide core essential services critical to the operation and development of economies. Typically infrastructure investments have high barriers to entry due to significant capital expenditure requirements, exclusive long term contracts or regulatory requirements. Infrastructure investments are comprised of long useful-life assets with high tangible value and relatively low value erosion over time.

The Program seeks to invest in opportunities in a variety of infrastructure sectors, including but not limited to, transportation, energy, power, utilities, water, wastewater, communications and social infrastructure.

StepStone Group LP ("StepStone") was engaged by NYCERS on October 20, 2014 to provide infrastructure advisory services for prospective investment opportunities and monitoring and reporting services for existing and new investments.

Since inception through March 31, 2023, the Program has committed US\$3,620.5 million to 43 partnership investments (the "Portfolio"). This quarterly monitoring report covers the performance of the Portfolio as of March 31, 2023 as well as significant activity that occurred during Q1 2023.

ALLOCATION SUMMARY

NYCERS has an Infrastructure allocation target of 4% of total pension assets. As of March 31, 2023, the market value of NYCERS Infrastructure Program represented approximately 2.2% of total pension assets, a 19 bps change from the prior quarter.

As of March 31, 2023. In USD millions.

	INCEPTION TO MARCH 31, 2023	INCEPTION TO DECEMBER 31, 2022	INCEPTION TO MARCH 31, 2022	QUARTERLY Δ	ANNUAL Δ
Total Pension Assets	\$86,071.0	\$85,974.0	\$72,609.0	\$97.0	\$13,462.0
Total Infrastructure Assets	\$1,863.8	\$1,699.2	\$1,407.6	\$164.6	\$456.2
% Allocation to Infrastructure	2.2%	2.0%	1.9%	19 bps	23 bps

Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses.

PERFORMANCE SUMMARY CONTINUED

As of March 31, 2023, the Infrastructure Program has achieved a Total Value to Paid-In multiple of 1.3x invested capital and an IRR of 12.2%.

As of March 31, 2023. In USD millions.

	INCEPTION TO MARCH 31, 2023	INCEPTION TO DECEMBER 31, 2022	INCEPTION TO MARCH 31, 2022	QUARTERLY Δ	ANNUAL Δ
Number of Managers	14	14	13	0	1
Number of Investments	43	41	35	2	8
Number of Active Investments	43	41	35	2	8
Committed Capital	\$3,620.5	\$3,293.8	\$2,692.0	\$326.7	\$928.4
Unfunded Commitment	1,849.2	1,655.4	1,442.6	193.9	406.6
Total Exposure	3,713.0	3,354.6	2,850.2	358.4	862.8
Total Contributed	1,929.3	1,793.2	1,371.1	136.1	558.2
Total Distributed	687.1	664.3	459.9	22.8	227.2
Total Market Value	1,863.8	1,699.2	1,407.6	164.6	456.2
Since Inception G/L	621.6	570.3	496.4	51.2	125.2
Total Value	\$2,550.9	\$2,363.5	\$1,867.5	\$187.4	\$683.4
Net DPI	0.4x	0.4x	0.3x		
Net TVM	1.3x	1.3x	1.4x		
Net IRR	12.2%	12.1%	13.3%	1 bps	(117 bps)

Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses.

IRR and TVM for certain vehicles may have been impacted by StepStone's or the underlying GP's use of subscription-backed credit facilities by such vehicles. Reinvested/recycled amounts increase contributed capital.

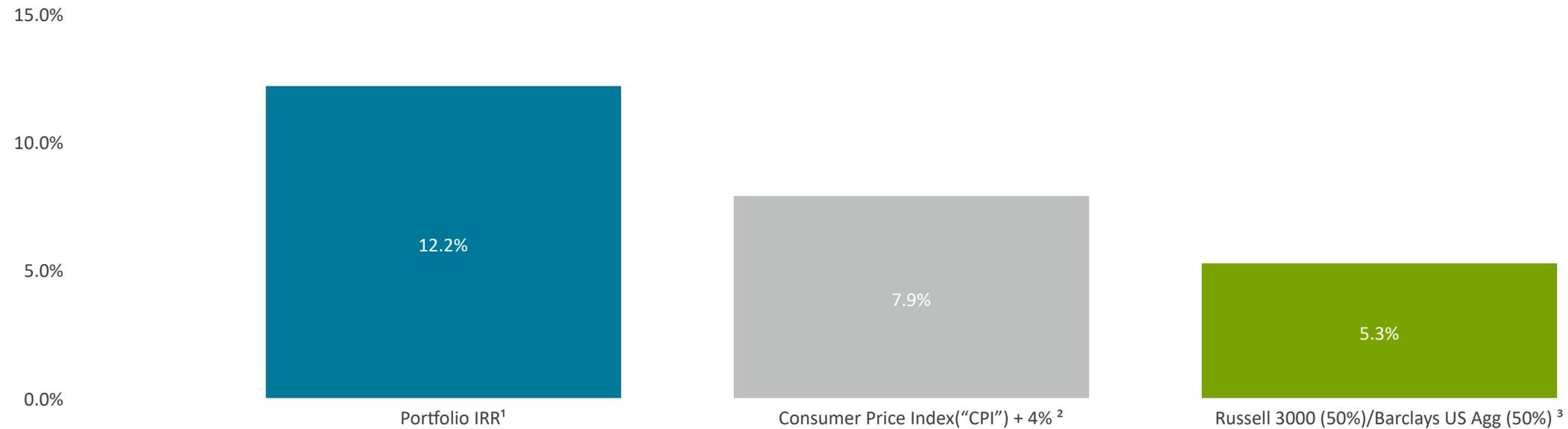
Unless otherwise indicated, all underlying investment attribution and performance information presented is net of fees and expenses charged by the underlying investment, but gross of StepStone vehicle/account fees and expenses.

Where indicated, net return figures presented for StepStone vehicle/account performance include fees and expenses paid to StepStone.

"Market Value" may not tie to financial statements due to timing variances related to underlying manager capital activity.

PORTFOLIO PERFORMANCE VS. BENCHMARK

The following graph illustrates Portfolio IRR performance versus benchmarks as of March 31, 2023.



1. NYCERS since inception Internal Rate of Return ("IRR") is calculated based on the Portfolio's daily cash flows and market value as of quarter-end. IRR is net of fund managers' fees, expenses and carried interest. Past performance is not necessarily indicative of future results.
2. Consumer Price Index ("CPI") benchmark represents the compound annual growth rate of the Consumer Price Index for All Urban Consumers and All Items, as provided by the U.S. Department of Labor: Bureau of Labor Statistics, calculated over a five-year rolling period plus a 4.0% premium.
3. Benchmark is a dollar-weighted PME+ calculation of daily changes in 50% of the Russell 3000® Index and 50% of the Barclays U.S. Aggregate® Index. These index comparisons are being provided solely for informational purposes as an indication of returns that could be earned by investors by making similar investments in the indexes and should not be relied upon for any purpose. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

PORTFOLIO DIVERSIFICATION

The Program’s objective is to build a Portfolio that is diversified by investment strategy, asset type, and geography. The target investment strategy ranges are as follows:

- Core Infrastructure Investments: 60% to 100%; and
- Non-Core Infrastructure Investments: 0% to 40%.

Actual percentages may differ substantially from these targets during the initial years of the Program. The following table illustrates the current diversification of the Portfolio by fund strategy, geography and industry focus.

As of March 31, 2023. In USD millions.

STRATEGY	MARKET VALUE	MARKET VALUE % OF TOTAL	UNFUNDED	UNFUNDED % OF TOTAL	EXPOSURE	EXPOSURE % OF TOTAL
Core	\$1,563.5	83.9%	\$1,493.8	80.8%	\$3,057.3	82.3%
Non-Core	\$300.3	16.1%	\$355.4	19.2%	\$655.7	17.7%
Total	\$1,863.8	100.0%	\$1,849.2	100.0%	\$3,713.0	100.0%

GEO FOCUS	MARKET VALUE	MARKET VALUE % OF TOTAL	UNFUNDED	UNFUNDED % OF TOTAL	EXPOSURE	EXPOSURE % OF TOTAL
Global	\$524.0	28.1%	\$1,125.3	60.9%	\$1,649.2	44.4%
OECD	\$998.9	53.6%	\$408.8	22.1%	\$1,407.6	37.9%
North America	\$341.0	18.3%	\$315.2	17.0%	\$656.2	17.7%
Total	\$1,863.8	100.0%	\$1,849.2	100.0%	\$3,713.0	100.0%

INDUSTRY	MARKET VALUE	MARKET VALUE % OF TOTAL	UNFUNDED	UNFUNDED % OF TOTAL	EXPOSURE	EXPOSURE % OF TOTAL
Diversified	\$1,390.8	74.6%	\$1,476.1	79.8%	\$2,866.9	77.2%
Energy	\$226.7	12.2%	\$217.6	11.8%	\$444.3	12.0%
Commodities Logistics	\$70.0	3.8%	\$145.9	7.9%	\$215.9	5.8%
Communication	\$126.3	6.8%	\$7.8	0.4%	\$134.1	3.6%
Transportation	\$33.1	1.8%	\$0.0	0.0%	\$33.1	0.9%
Renewables	\$16.9	0.9%	\$1.9	0.1%	\$18.8	0.5%
Total	\$1,863.8	100.0%	\$1,849.2	100.0%	\$3,713.0	100.0%

PORTFOLIO REVIEW

QUARTERLY HIGHLIGHTS

- New Investment Commitments – During the first quarter of 2023, the Program closed on 2 new investment commitments totaling \$324.0 million.

As of March 31, 2023. In USD millions.

INVESTMENT	CLOSING DATE	VINTAGE YEAR	STRATEGY	GEO FOCUS	INDUSTRY FOCUS	COMMITTED CAPITAL
EQT Infrastructure VI (No.2) USD SCSp	Mar-2023	2023	Infrastructure	Global	Diversified	\$162.0
Global Infrastructure Partners V-A/B, L.P.	Mar-2023	2023	Infrastructure	OECD	Diversified	\$162.0
Total						\$324.0

- Subsequent to quarter-end, the Program closed on 2 new investment commitments.

In USD millions.

INVESTMENT	CLOSING DATE	VINTAGE YEAR	STRATEGY	GEO FOCUS	INDUSTRY FOCUS	COMMITTED CAPITAL
Ardian Infrastructure Fund VI	Jun-2023	2023	Infrastructure	OECD	Diversified	\$178.5
Elite Co-Invest AIV, L.P.	Jul-2023	2023	Infrastructure	Europe	Renewables	\$24.0
Total						\$202.5

PORTFOLIO REVIEW CONTINUED

- New Underlying Fund Investments – During the first quarter of 2023, 17 investment positions were added to the Portfolio. Below is a list of the top ten based on invested capital.

As of March 31, 2023. In USD millions.

COMPANY	INVESTMENT DATE	STAGE	INDUSTRY	COUNTRY	EXPOSED INVESTED CAPITAL	EXPOSED MARKET VALUE
European Telecom Towers (DFMG)	Feb-2023	Private	Telecom	Germany	\$21.1	\$21.5
PSO	Mar-2023	Private	Telecom	Poland	\$15.8	\$16.3
Intrado	Jan-2023	Private	Telecom	United States	\$13.2	\$13.2
Environmental 360 Solutions Ltd.	Jan-2023	Private	Sustainability	Canada	\$7.4	\$7.3
Lines of Credit - Pooled Contribution	Feb-2023	Private	Other	United States	\$5.0	\$5.0
Greenvolt - Energias Renováveis, S.A.	Feb-2023	Public	Sustainability	Portugal	\$2.4	\$2.3
Seraya Partners Fund I, L.P.	Feb-2023	Private	Other	Singapore	\$1.7	\$1.5
Grand Valley Wind	Feb-2023	Private	Sustainability	Canada	\$1.6	\$1.6
Ancala Infrastructure Fund III SCSp	Feb-2023	Private	Other	United Kingdom	\$1.5	\$1.4
Catalyze, Inc.	Feb-2023	Private	Sustainability	United States	\$1.3	\$1.3

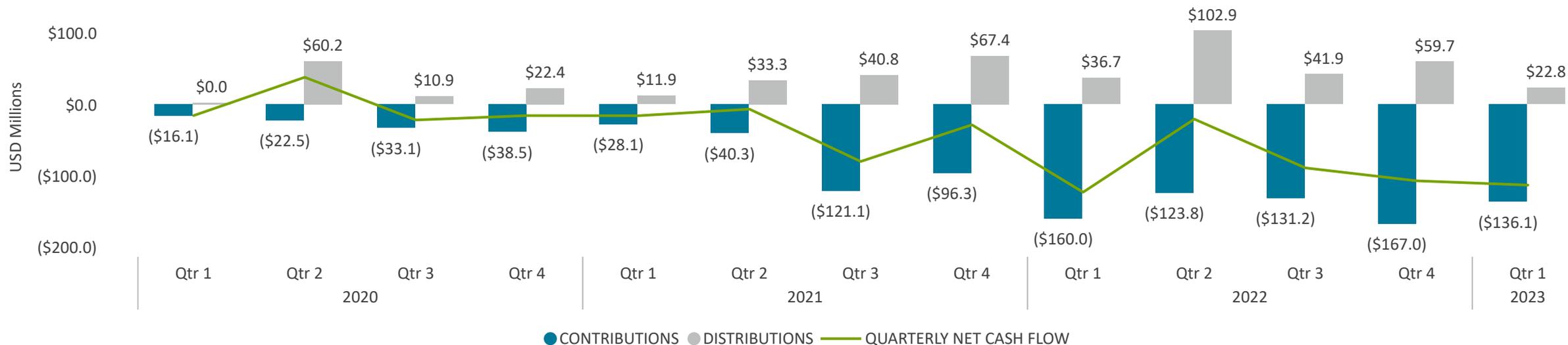
- Company Exits – During the first quarter of 2023, 1 investment position exited the Portfolio.

As of March 31, 2023. In USD millions.

COMPANY	INVESTMENT DATE	EXIT DATE	STAGE	INDUSTRY	COUNTRY	INVESTED CAPITAL	TOTAL VALUE
SNC-Lavalin Compression Services, LLC	Jul-2018	Feb-2023	Private	Midstream	United States	\$2.6	\$3.4

QUARTERLY CASH FLOW ACTIVITY

During the first quarter of 2023, the portfolio contributed \$136.1 million and received \$22.8 million of distributions, for a net cash outflow of \$113.3 million.



QUARTERLY TOP CONTRIBUTIONS AND DISTRIBUTIONS

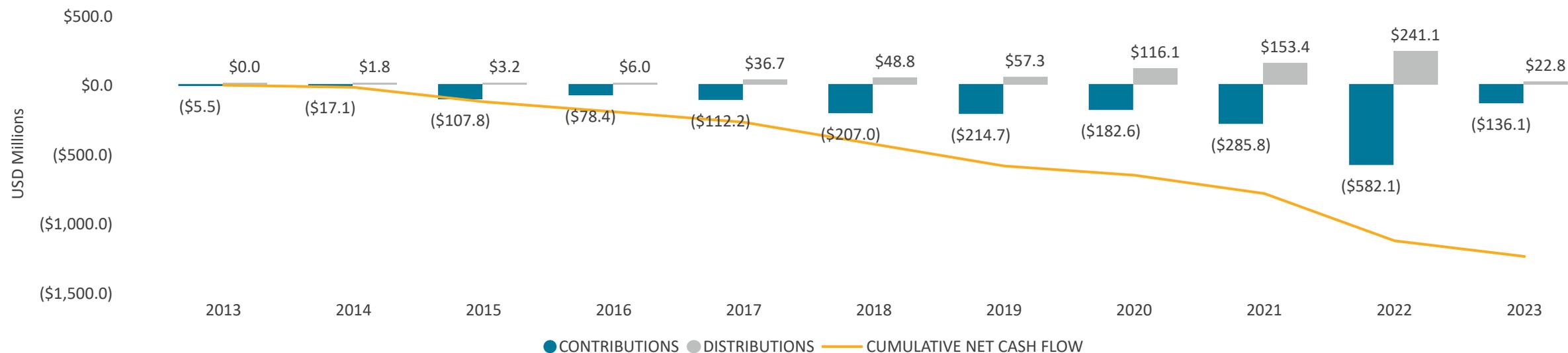
As of March 31, 2023. In USD millions.

INVESTMENT	CONTRIBUTIONS	% OF TOTAL
Axiom Infrastructure North America (2021)	\$33.0	24.3%
EQT Infrastructure V (No.2) USD SCSp	\$20.3	14.9%
InfraVia European Fund V SCSp	\$20.1	14.8%
Stonepeak Infrastructure Fund IV, L.P.	\$14.7	10.8%
Global Energy & Power Infrastructure Fund III, L.P.	\$13.0	9.5%
Top 5 Contributions	\$101.1	74.3%

INVESTMENT	DISTRIBUTIONS	% OF TOTAL
KKR Global Infrastructure Investors II L.P.	\$5.2	22.9%
ASF VII Infrastructure L.P.	\$3.0	13.1%
NYCRS EIG Energy Partners, L.P.	\$2.1	9.2%
Brookfield Infrastructure Fund IV, L.P.	\$1.8	7.9%
Global Infrastructure Partners III-A/B, L.P.	\$1.8	7.8%
Top 5 Distributions	\$13.9	60.9%

SINCE INCEPTION ANNUAL CASH FLOW ACTIVITY

During the three months ended March 31, 2023, the portfolio contributed \$136.1 million and received \$22.8 million of distributions, for a net cash outflow of \$113.3 million.



YEAR-TO-DATE TOP CONTRIBUTIONS AND DISTRIBUTIONS

As of March 31, 2023. In USD millions.

INVESTMENT	CONTRIBUTIONS	% OF TOTAL
Axiom Infrastructure North America (2021)	\$33.0	24.3%
EQT Infrastructure V (No.2) USD SCSp	\$20.3	14.9%
InfraVia European Fund V SCSp	\$20.1	14.8%
Stonepeak Infrastructure Fund IV, L.P.	\$14.7	10.8%
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Brookfield Infrastructure Fund IV, L.P.	\$1.8	7.9%
Global Infrastructure Partners III-A/B, L.P.	\$1.8	7.8%
Top 5 Distributions	\$13.9	60.9%

PERFORMANCE BY VINTAGE YEAR

The following table illustrates the Portfolio's since-inception investment performance by vintage year as of March 31, 2023.

As of March 31, 2023. In USD millions.

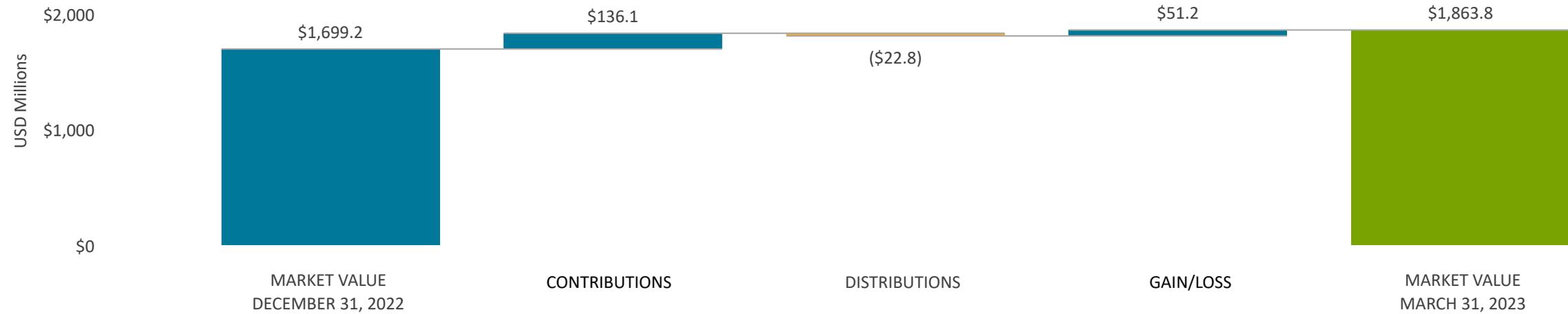
VINTAGE YEAR	COMMIT	CONT	DIST	NAV	TOTAL VALUE	UNFUNDED	TOTAL EXPOSURE	TOTAL EXPOSURE % OF TOTAL	NET DPI	NET TVM	NET IRR
2013	\$75.0	\$67.4	\$70.2	\$64.2	\$134.5	\$13.3	\$77.5	2%	1.0x	2.0x	12.9%
2014	\$197.0	\$232.1	\$213.2	\$201.9	\$415.1	\$4.6	\$206.5	6%	0.9x	1.8x	13.9%
2016	\$327.3	\$294.6	\$175.2	\$252.9	\$428.1	\$83.3	\$336.2	9%	0.6x	1.5x	11.8%
2017	\$189.3	\$174.7	\$132.1	\$129.7	\$261.8	\$32.3	\$162.0	4%	0.8x	1.5x	13.6%
2018	\$316.9	\$270.5	\$40.1	\$288.1	\$328.2	\$67.9	\$356.0	10%	0.1x	1.2x	10.2%
2019	\$270.8	\$231.1	\$37.6	\$253.3	\$290.9	\$51.3	\$304.6	8%	0.2x	1.3x	13.9%
2020	\$356.5	\$163.6	\$10.4	\$169.9	\$180.3	\$201.3	\$371.2	10%	0.1x	1.1x	7.9%
2021	\$781.6	\$395.7	\$7.7	\$404.4	\$412.1	\$388.9	\$793.3	21%	NM	NM	NM
2022	\$782.0	\$99.7	\$0.6	\$99.3	\$99.9	\$682.3	\$781.6	21%	NM	NM	NM
2023	\$324.0	\$0.0	\$0.0	\$0.0	\$0.0	\$324.0	\$324.0	9%	NM	NM	NM
Total	\$3,620.5	\$1,929.3	\$687.1	\$1,863.8	\$2,550.9	\$1,849.2	\$3,713.0	100%	0.4x	1.3x	12.2%



* Performance of funds with less than two years of activity is not considered meaningful.

QUARTERLY VALUATION MOVEMENT

During the first quarter of 2023, the value of NYCERS - Infrastructure's portfolio increased by \$51.2 million, or 3.0%.



QUARTERLY TOP INVESTMENT GAINS AND LOSSES

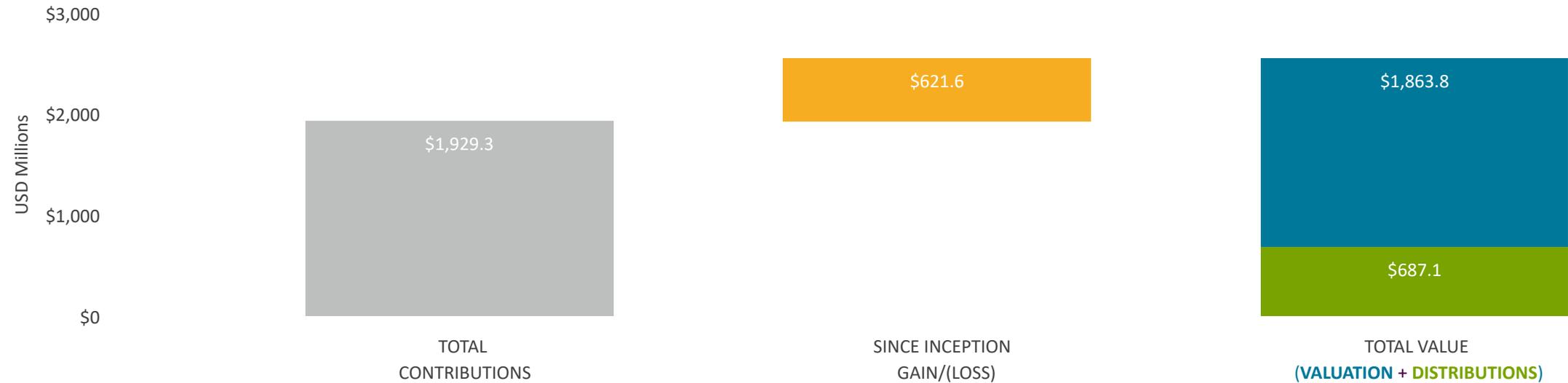
As of March 31, 2023. In USD millions.

INVESTMENT	\$	%
IFM Global Infrastructure Fund	\$5.4	3.7%
KKR Global Infrastructure Investors III L.P.	\$5.3	8.1%
EQT Infrastructure V (No.2) USD SCSp	\$4.8	6.8%
KKR Global Infrastructure Investors II L.P.	\$4.2	10.9%
EQT Infrastructure IV (No.2) USD SCSp	\$3.7	3.7%
Top 5 Gains	\$23.2	5.6%

INVESTMENT	\$	%
Brookfield Infrastructure Fund V, LP	(\$1.7)	(323.3%)
DIF Infrastructure VII SCSp	(\$1.5)	
Blackrock Global Infrastructure Fund IV	(\$0.7)	(8.8%)
Global Energy & Power Infrastructure Fund II	(\$0.6)	(4.0%)
ASF VIII Infrastructure B L.P.	(\$0.5)	(3.3%)
Bottom 5 Losses	(\$5.0)	(12.3%)

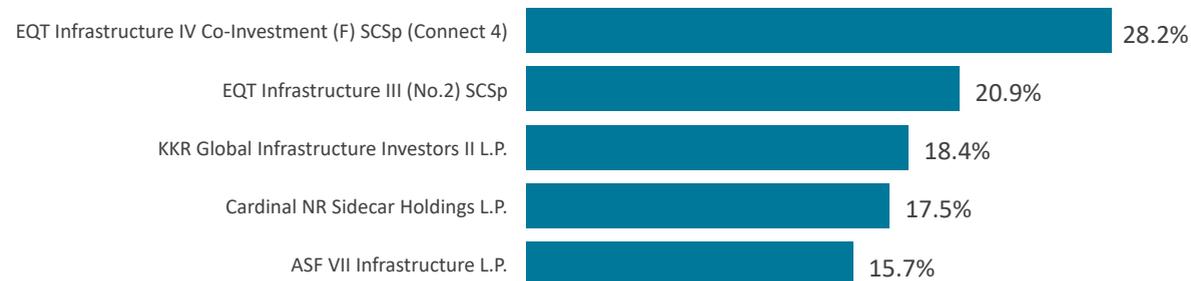
SINCE INCEPTION VALUATION MOVEMENT

Through March 31, 2023, NYCERS - Infrastructure's portfolio has generated a gain of \$621.6 million.

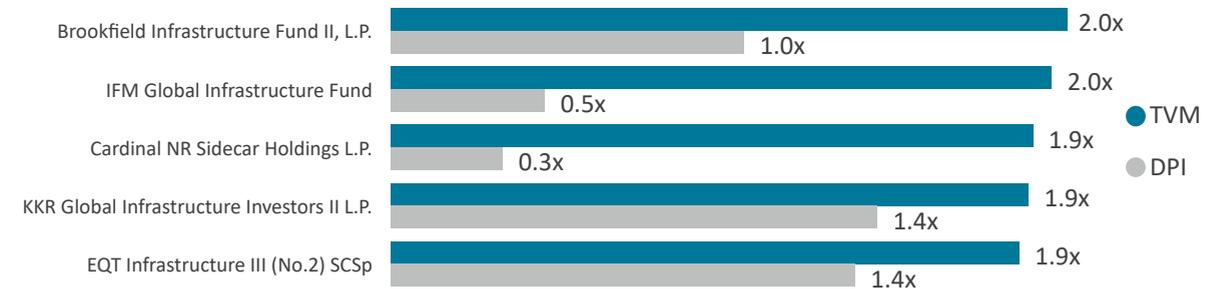


SINCE INCEPTION TOP PERFORMING INVESTMENTS

TOP 5 PERFORMING INVESTMENTS BY IRR

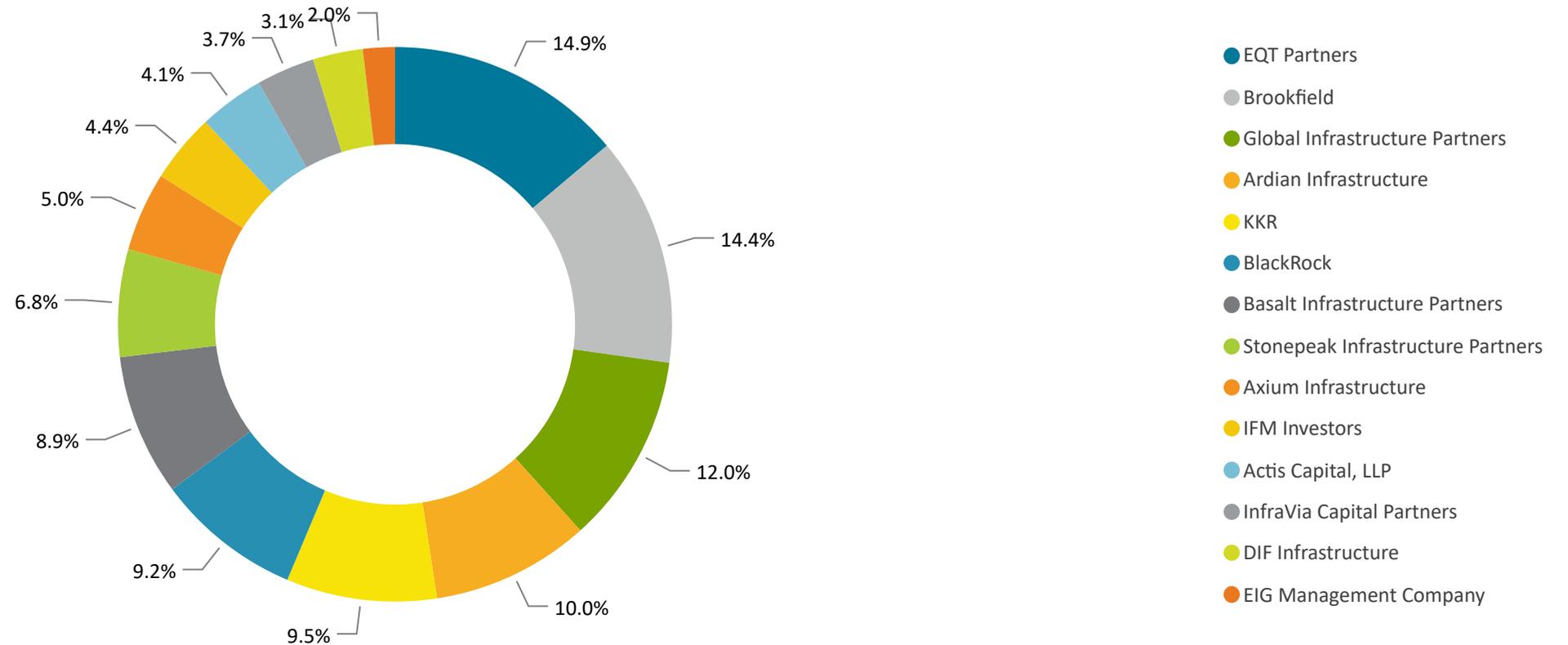


TOP 5 PERFORMING INVESTMENTS BY TVM



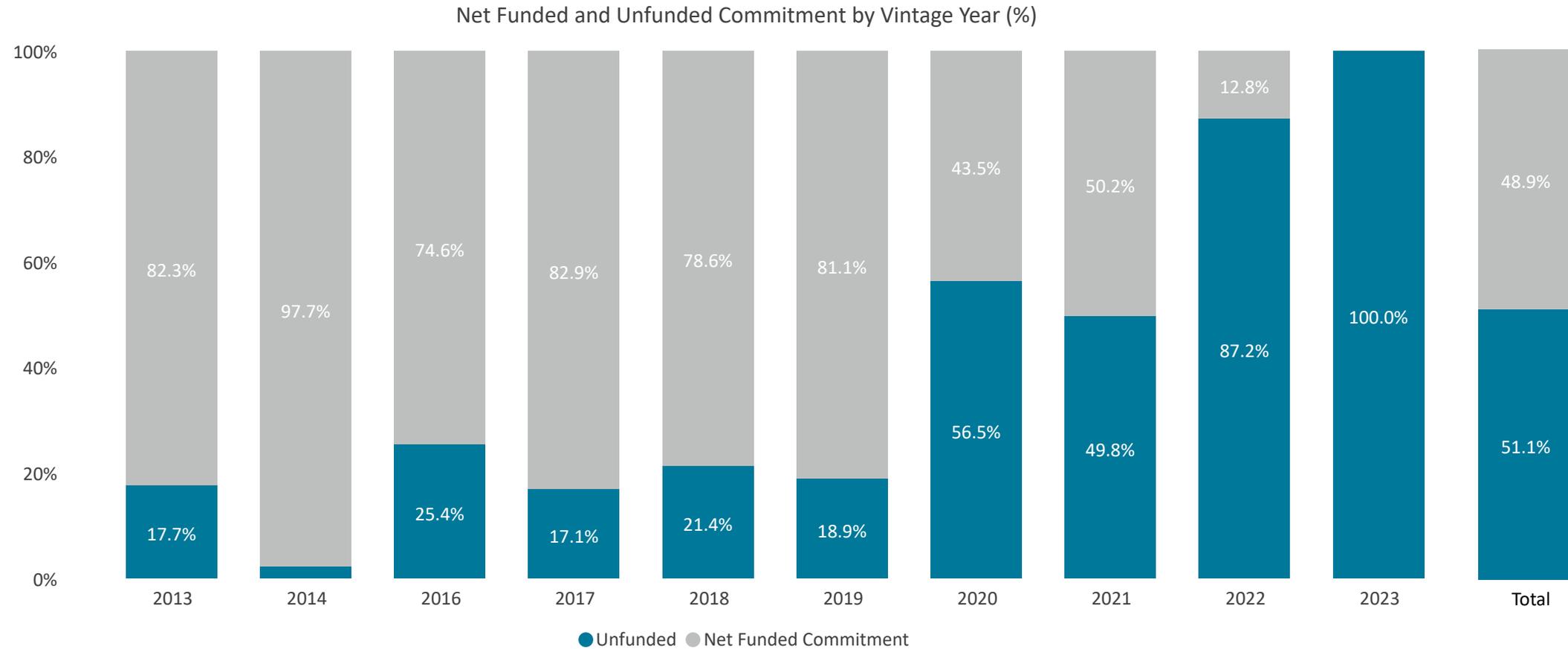
MANAGER DIVERSIFICATION

As of March 31, 2023, the Program had made 14 investment commitments to 43 managers. NYCERS seeks to limit its exposure to any single manager to no more than 20% of the total Infrastructure Program when fully invested. As the Program matures and closes on additional commitments, the single manager exposure is expected to decline significantly. Below is the Portfolio's current exposure by manager.



NET UNFUNDED AND UNFUNDED COMMITMENT BY VINTAGE YEAR

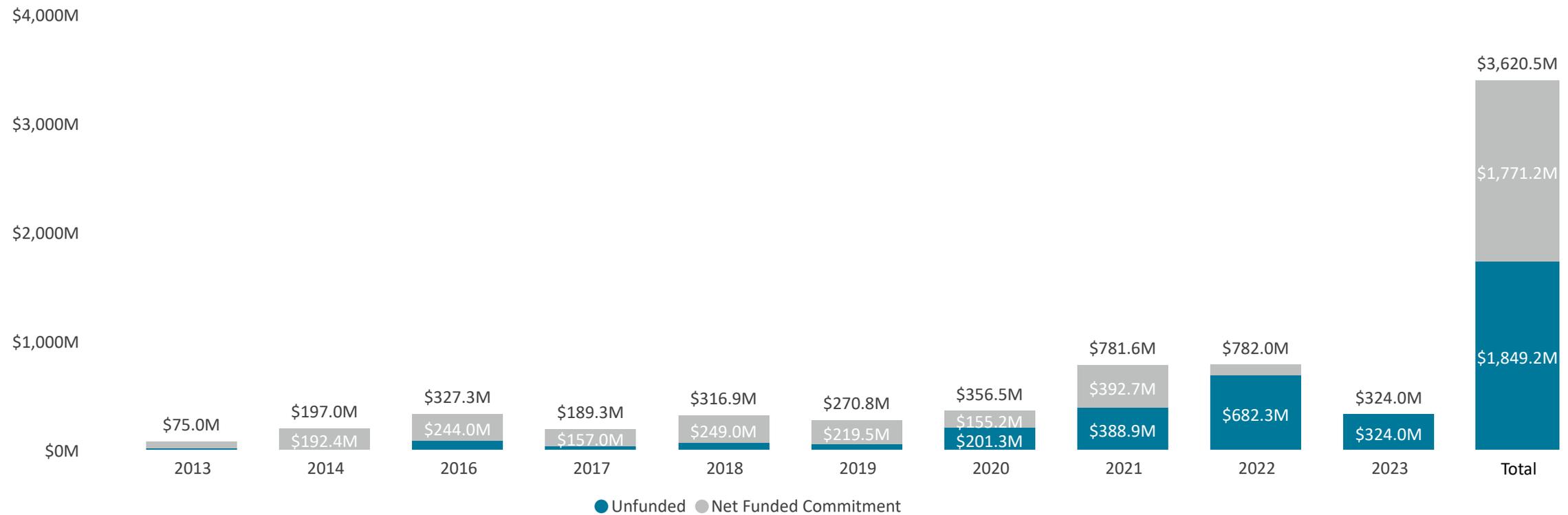
The following chart illustrates the Portfolio's net funded commitments (defined as total contributions inside commitment less any returns of excess capital and recallable distributions) as a percentage of total capital commitments, by fund vintage year, as of March 31, 2023. Overall, the Portfolio was 51.1% unfunded as of quarter-end.



NET UNFUNDED AND UNFUNDED COMMITMENT BY VINTAGE YEAR CONTINUED

The following chart illustrates the Portfolio's net funded commitments relative to total capital commitments, by fund vintage year, as of March 31, 2023. Overall, the Portfolio had US\$1,849.2 million of unfunded commitments as of quarter-end.

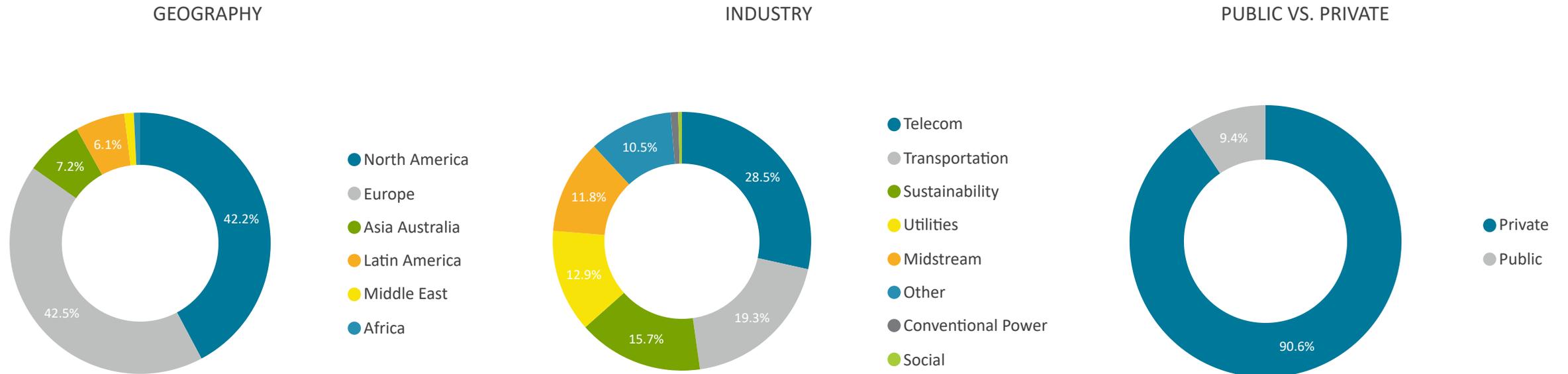
Net Funded and Unfunded Commitment by Vintage Year (US\$ millions)



PORTFOLIO COMPANY LEVEL ANALYSIS

As of quarter-end, the Portfolio had exposure to 365 unrealized portfolio companies/investment positions. As the Portfolio matures, the number of portfolio companies/investment positions is expected to increase significantly. On the individual fund level, all current investments are within the single investment limitation of 15% of total fund size. The Program's individual portfolio investment exposure is relatively concentrated as a result of the relative immaturity of the Program.

The following chart illustrates the portfolio's diversification by geography, industry, and publicly-traded vs. privately-held assets based on Market Value at the portfolio company level as of March 31, 2023.



SCHEDULE OF INVESTMENTS

As of March 31, 2023. In USD millions.

INVESTMENT	CLOSING DATE	VINTAGE YEAR	GEO FOCUS	COMMIT	CONT	DIST	NAV	TOTAL VALUE	UNFUNDED	NET DPI	NET TVM	NET IRR
Actis Energy 4	Dec-2016	2016	Global	\$64.3	\$64.4	\$79.9	\$12.2	\$92.2	\$24.4	1.2x	1.4x	14.0%
Actis Energy 5	Jun-2020	2020	Global	\$113.0	\$15.3	\$0.0	\$6.9	\$6.9	\$97.7	NM	NM	NM
Ardian Infra Fund V Co-Invest Eden	Feb-2022	2022	OECD	\$23.5	\$23.5	\$0.0	\$26.2	\$26.2	\$0.0	NM	NM	NM
Ardian Infra Fund V Co-Invest Lemon	Dec-2022	2022	OECD	\$18.2	\$16.5	\$0.0	\$16.9	\$16.9	\$1.9	NM	NM	NM
Ardian Infrastructure Fund V B	Mar-2019	2019	OECD	\$72.3	\$50.2	\$1.9	\$59.5	\$61.5	\$22.6	0.0x	1.2x	15.5%
ASF VII Infrastructure L.P.	Apr-2017	2016	OECD	\$66.0	\$51.2	\$19.9	\$55.0	\$74.9	\$15.9	0.4x	1.5x	15.7%
ASF VIII Infrastructure B L.P.	Aug-2021	2021	Global	\$147.0	\$17.0	\$3.0	\$15.1	\$18.1	\$130.0	NM	NM	NM
Axium Infrastructure North America (2017)	Aug-2017	2017	North America	\$67.1	\$70.2	\$20.9	\$75.0	\$95.9	\$0.0	0.3x	1.4x	8.6%
Axium Infrastructure North America (2021)	Sep-2021	2021	North America	\$93.6	\$95.5	\$3.1	\$96.3	\$99.4	(\$0.0)	NM	NM	NM
Basalt Infrastructure Partners III	Feb-2021	2021	Global	\$114.0	\$77.0	\$0.0	\$82.8	\$82.8	\$37.0	NM	NM	NM
Basalt Infrastructure Partners IV A L.P.	Oct-2022	2022	Global	\$167.7	\$0.0	\$0.0	\$0.0	\$0.0	\$167.7	NM	NM	NM
BIP III Ride Co-Investment L.P. (Project Ride)	Aug-2022	2022	OECD	\$16.8	\$16.8	\$0.0	\$18.7	\$18.7	\$0.0	NM	NM	NM
BIS NYC Infrastructure Emerging Manager Opportunities Fund, L.P.	Jul-2020	2020	Global	\$71.7	\$16.7	\$0.0	\$17.6	\$17.6	\$55.0	0.0x	1.1x	5.6%
Blackrock Global Infrastructure Fund IV	Jun-2022	2022	Global	\$134.0	\$8.8	\$0.0	\$7.5	\$7.5	\$125.2	NM	NM	NM
Brookfield Infrastructure Fund II, L.P.	Jul-2013	2013	Global	\$75.0	\$67.4	\$70.2	\$64.2	\$134.5	\$13.3	1.0x	2.0x	12.9%
Brookfield Infrastructure Fund III Co-Inv (aka Cardinal NR Sidecar)	Oct-2018	2018	North America	\$10.5	\$10.6	\$3.5	\$16.5	\$20.0	\$0.0	0.3x	1.9x	17.5%
Brookfield Infrastructure Fund III, L.P.	Apr-2016	2016	Global	\$91.0	\$71.1	\$24.9	\$75.6	\$100.4	\$31.5	0.3x	1.4x	10.5%
Brookfield Infrastructure Fund IV Co-Investment (Snow)	Oct-2019	2019	Global	\$10.0	\$10.1	\$1.4	\$14.4	\$15.9	\$0.0	0.1x	1.6x	15.5%
Brookfield Infrastructure Fund IV, L.P.	May-2019	2019	OECD	\$101.0	\$96.0	\$20.5	\$102.4	\$122.9	\$11.6	0.2x	1.3x	13.4%
Brookfield Infrastructure Fund V, LP	Jul-2022	2022	North America	\$167.7	\$0.0	\$0.0	(\$1.2)	(\$1.2)	\$167.7	NM	NM	NM
DIF Infrastructure VII SCSp	Nov-2022	2022	Global	\$109.8	\$0.0	\$0.0	(\$1.5)	(\$1.5)	\$109.8	NM	NM	NM
EQT Infrastructure III (No.2) USD SCSp	Feb-2017	2017	Global	\$56.3	\$64.4	\$88.2	\$31.2	\$119.4	\$3.2	1.4x	1.9x	20.9%
EQT Infrastructure IV (No.2) USD SCSp	Dec-2018	2018	OECD	\$101.5	\$93.1	\$16.2	\$104.6	\$120.8	\$19.5	0.2x	1.3x	11.6%
EQT Infrastructure IV Co-Investment (B) SCSp (Saber)	Jul-2019	2020	OECD	\$8.4	\$8.5	\$0.5	\$10.4	\$10.9	\$0.0	0.1x	1.3x	8.9%
EQT Infrastructure IV Co-Investment (F) SCSp (Connect)	Aug-2020	2020	Global	\$15.7	\$14.3	\$0.0	\$24.2	\$24.2	\$1.5	0.0x	1.7x	28.2%
EQT Infrastructure IV Co-Investment (G) SCSp (Lightspeed)	Jun-2020	2020	OECD	\$12.7	\$12.8	\$0.0	\$16.6	\$16.6	\$0.0	0.0x	1.3x	10.2%
EQT Infrastructure V (No.2) USD SCSp	Oct-2020	2020	Global	\$135.0	\$96.1	\$9.9	\$94.2	\$104.1	\$47.2	NM	NM	NM
EQT Infrastructure VI (No.2) USD SCSp	Mar-2023	2023	Global	\$162.0	\$0.0	\$0.0	\$0.0	\$0.0	\$162.0	NM	NM	NM
Global Energy & Power Infrastructure Fund II	Apr-2014	2014	OECD	\$45.0	\$49.1	\$48.7	\$15.1	\$63.7	\$1.3	1.0x	1.3x	13.8%

* Performance of funds with less than two years of activity is not considered meaningful.

SCHEDULE OF INVESTMENTS CONTINUED

As of March 31, 2023. In USD millions.

INVESTMENT	CLOSING DATE	VINTAGE YEAR	GEO FOCUS	COMMIT	CONT	DIST	NAV	TOTAL VALUE	UNFUNDED	NET DPI	NET TVM	NET IRR
Global Energy & Power Infrastructure Fund III, L.P.	Jul-2018	2019	OECD	\$87.5	\$74.9	\$13.8	\$76.9	\$90.7	\$17.1	0.2x	1.2x	13.1%
Global Infrastructure Partners III-A/B, L.P.	Jan-2016	2016	OECD	\$106.0	\$107.8	\$50.4	\$110.1	\$160.6	\$11.5	0.5x	1.5x	10.5%
Global Infrastructure Partners IV-A/B, L.P.	Mar-2019	2018	OECD	\$117.4	\$89.9	\$0.5	\$95.7	\$96.3	\$33.5	0.0x	1.1x	5.9%
Global Infrastructure Partners V-A/B, L.P.	Mar-2023	2023	OECD	\$162.0	\$0.0	\$0.0	\$0.0	\$0.0	\$162.0	NM	NM	NM
IFM Global Infrastructure Fund	Jan-2014	2014	OECD	\$75.0	\$100.1	\$45.5	\$149.8	\$195.3	\$0.0	0.5x	2.0x	11.7%
InfraVia European Fund V SCSp	Feb-2022	2022	OECD	\$128.0	\$34.1	\$0.6	\$32.6	\$33.2	\$93.6	NM	NM	NM
KKR Global Infrastructure Investors II L.P.	Jun-2015	2014	OECD	\$77.0	\$82.9	\$119.0	\$37.0	\$156.1	\$3.3	1.4x	1.9x	18.4%
KKR Global Infrastructure Investors III L.P.	Mar-2018	2018	OECD	\$87.5	\$76.9	\$19.9	\$71.3	\$91.2	\$14.9	0.3x	1.2x	8.4%
KKR Global Infrastructure Investors IV (USD) SCSp	May-2021	2021	Global	\$205.0	\$86.1	\$1.1	\$79.4	\$80.5	\$120.0	NM	NM	NM
NYCRS EIG Energy Partners Co-Investment, L.P.	Jan-2018	2022	North America	\$16.5	\$0.0	\$0.0	\$0.0	\$0.0	\$16.5	NM	NM	NM
NYCRS EIG Energy Partners, L.P.	Aug-2017	2017	North America	\$65.9	\$40.1	\$23.0	\$23.5	\$46.5	\$29.1	0.6x	1.2x	7.6%
Stonepeak Infrastructure Fund IV, L.P.	Feb-2021	2021	North America	\$171.0	\$75.4	\$0.5	\$82.0	\$82.4	\$95.6	NM	NM	NM
Stonepeak Patagonia (Co-Invest) Holdings LP (Project Panther)	Dec-2021	2021	North America	\$27.5	\$24.8	\$0.0	\$28.8	\$28.8	\$2.7	NM	NM	NM
Stonepeak Tiger (Co-Invest) Holdings (I-B) LP	Apr-2021	2021	North America	\$23.5	\$19.9	\$0.0	\$20.1	\$20.1	\$3.6	NM	NM	NM
Total				\$3,620.5	\$1,929.3	\$687.1	\$1,863.8	\$2,550.9	\$1,849.2	0.4x	1.3x	12.2%

* Performance of funds with less than two years of activity is not considered meaningful.

RISK MANAGEMENT MATRIX

Category	Requirement	Status	Status Notes
Allocation	NYCERS has an Infrastructure allocation target of 4% of total pension assets.	✓	The market value of NYCERS Infrastructure Program represented approximately 2.2% of total pension assets
Performance vs. Benchmarks	The performance benchmark for the Infrastructure Portfolio is to meet or exceed: (i) The Consumer Price Index (“CPI”) plus 4% net of fees over a rolling 5-year period and (ii) A dollar-weighted PME+ (“PME”) calculation of daily changes in 50% of the Russell 3000® Index and 50% of the Barclays U.S. Aggregate® Index. The Infrastructure Portfolio is expected to generate a total return, net of investment management fees, of at least 6.5%	✓	As of March 31, 2023, the Portfolio outperformed the CPI and PME benchmark by 4.3% and 6.9%, respectively.
Strategy Diversification	Core Infrastructure Investments: 60-100% Non-Core Infrastructure Investments: 0-40% Actual percentages may differ substantially from these targets during the initial years of the Program.	✓	The Program is in compliance with the Core/Non-Core allocation ranges. Currently the Program has 82.3% exposure to Core investments and 17.7% exposure to Non-Core investments.
Asset Type & Location Diversification	The Program will seek diversification by asset type, revenue drivers, and geography. The portfolio may include a variety of assets including but not limited to electricity transmission, pipelines, airports, toll roads, communication towers and electric generators, windmills etc. to vary the sources of revenue to the portfolio.	✓	The asset types and geographic location of current Portfolio investments are in compliance with the Program’s Investment Policy Statement and Permissible Markets.
Leverage	The average leverage of all investments in the Program is to be no higher than 65%.	✓	The Program is in compliance with the average leverage limitation. The current leverage level is 36.7%.
Single Investment Size & Manager Diversification	The maximum commitment to a single investment is limited to no more than 15% of the aggregate committed capital of each fund. The maximum commitment to a single manager is limited to 20% of the total Infrastructure Program allocation when fully invested.	✓	On the individual fund level, all current investments are in compliance with the single investment limitation of 15% of total fund size. The Program is in compliance with the single manager limitation of 20% of the total Infrastructure Program.

¹The Program's leverage level is calculated by using a weighted average of each underlying investment's leverage and Net Asset Value as of March 31, 2023.

APPENDIX

MARKET UPDATE

North America

Notable transactions completed and announced over the quarter include:

- Brookfield Super-Core Infrastructure entered into a definitive agreement to acquire an additional 30% stake in FirstEnergy Transmission from First Energy Corp. for US\$3.5 billion. Brookfield's purchased a 19.9% stake in FirstEnergy Transmission in May 2022
- EQT Active Core Infrastructure and PSP announced the take-private acquisition of Radius Global Infrastructure for a total enterprise value of US\$3.0 billion. Radius owns and acquires critical digital infrastructure, including ground, tower, rooftop, and in-building cell sites, in over 20 countries
- Stonepeak completed its acquisition of Intrado Life & Safety from Apollo Global Management for US\$2.4 billion. Intrado Life & Safety provides public emergency telecommunications services with a 40-year track record of connecting citizens to 911 services
- A subsidiary of Hydro-Québec completed its acquisition of a 100% stake in Great River Hydro from ArcLight Energy Partners for US\$2.0 billion. Great River Hydro owns 13 hydropower generating stations with a combined installed capacity of 589MW
- A Consortium led by Invenergy, including CDPQ and Blackstone, entered an agreement to acquire a 1.4GW portfolio of renewable assets (10 wind and four solar assets) that are unregulated, contracted, and operational, from American Electric Power for US\$1.5 billion
- Vistra Corp. executed a definitive agreement to acquire Energy Harbor Corp. for US\$3.43 billion, composed of US\$3 billion in cash and a 15% stake in a newly-formed subsidiary named Vistra Vision. Vistra Vision will merge each company's nuclear and retail businesses with a portfolio of existing renewable and storage projects. Following the transaction, Vistra will own the second-largest competitive nuclear fleet in the US
- KKR's credit and infrastructure funds committed an additional US\$1.15 billion to expand Altavair's global portfolio of leased commercial aircraft. KKR acquired a 50% stake in Altavair in 2019. The company acquires, leases, re-purposes, and sells commercial jet aircraft and engines
- ACS Group acquired a total of ~57% stake in a Texas toll road SH-288 for US\$1.15 billion from Israel's Clal Insurance, InfraRed Capital Partners, Northleaf Capital Partners, and Star America
- Silicon Ranch closed a US\$600 million equity raise led by Manulife Investment Management, TD Greystone Fund, and Mountain Group Partners. Silicon Ranch owns 5GW of contracted solar and battery storage systems across the US and Canada
- Brookfield Global Transition Fund invested up to US\$500 million of growth capital into California Bioenergy. California Bioenergy partners with dairy farmers to design, build, own, and operate renewable natural gas projects via 50 operational manure digesters

Europe

During the quarter, the European infrastructure market continued in line with 2022 activity. Some notable transactions were completed in the Renewables, Power & Utilities and Transport sector.

- KKR has agreed to sell a 50% stake in renewable energy developer X-Elio to co-shareholder Brookfield for an implied price of US\$900 million, valuing the company at US\$1.8 billion. The remaining 50% stake will be acquired by Brookfield as a follow-on investment through the original fund investment
- Arjun Infrastructure Partners has invested €300 million, acquiring a 30% stake in Amarenco, an independent, solar-focused power producer. Amarenco owns ~400MW of operating solar plants and recently expanded its portfolio with the acquisition of Infracapital's 90% stake in Infram, a French solar JV
- GIC has invested ~€1 billion into Portuguese utility operator, EDP's, renewables arm, as part of an equity raise. GIC subscribed to 43 million of the 51 million shares available
- Lightsource bp has agreed to sell a solar PV portfolio in Spain to Spanish managers Plenium Partners. The value of the transaction has not been disclosed but is estimated to be worth ~€300 million. Lightsource bp's Spanish portfolio includes ~250MW of operational solar PV
- CVC Capital Partners has agreed to sell PKP Energetyka, a Polish electricity distribution network serving rail networks, to state-owned power company PGE. The deal valued the company at an enterprise value of PLN 5.94 billion (~€1.27 billion) implying an EBITDA multiple of ~8.5x. The equity price was PLN 1.9 billion (~€0.4 billion), with the remainder of the transaction funded by debt
- Macquarie Asset Management ("MAM") has agreed to sell its 25% stake in Energie Steiermark ("ESTAG") an Austrian natural gas and electricity grid network, to the Provincial Government of Styria for €525 million. ESTAG operates a 31,300km electricity grid and a 4,200km natural gas supply network
- MAM has also agreed to sell its 24% stake in Open Grid Europe ("OGE"), to Belgian gas transmission operator, Fluxys. Both parties declined to disclose pricing, however, the stake has an estimated valuation of €800 million. OGE has a regulated asset base of ~€4 billion
- Macquarie AirFinance ("MAF") announced a US\$2.2 billion fleet acquisition from Kuwait's Aviation Lease and Finance Company. MAF's shareholders, Macquarie Asset Management, PGGM Infrastructure Fund and Australian Retirement Trust are providing US\$600 million of equity to fund the acquisition of 53 passenger aircraft and an order of 20 Boeing 737 MAX aircraft
- Alpen Glasfaser, a €1 billion Austrian fiber JV between Meridiam and Magenta Telekom has been approved by the EU Commission. The company will now begin to roll out a fiber network across 650,000 homes primarily in rural areas and medium-sized towns in Austria

Australia

Australia and New Zealand infrastructure market activity remained robust during the first quarter of 2023. Energy and renewables activity has been particularly prevalent over the past six months, contrasted against a gradual slowdown in telecommunications sector activity following several major transactions reaching financial close during 2022

Notable transactions occurring during the quarter included the following:

- Brookfield Asset Management and EIG Global Energy Partner's bid to take ASX listed Origin Energy private. During the quarter, GIC and Temasek joined the bidding consortium and in February, it announced a binding Scheme Implementation Deed to take Origin private. At A\$8.9/share the deal represents an enterprise value of ~A\$18.7 billion. Take-private of Origin is subject to customary regulatory review and approval processes before it can close
- Financial close was reached for Partners Group's sale of its A\$4 billion portfolio of renewables assets, CWP Renewables, to Squadron Energy. CWP Renewables' portfolio represents 1.1GW of operational onshore wind assets, a construction ready 414MW wind farm and 30MW battery project
- Electricity distribution and transmission business Spark Infrastructure progressed the carve-out of its renewables development platform, Spark Renewables, shortlisting three proponents including APA Group, Engie and Tenaga Nasional
- Greenfield renewables activity was buoyed by an Acciona led JV reaching financial close on the 1.02GW MacIntyre Wind Precinct in Queensland Australia. The 180 turbine precinct is expected to cost A\$1.96 billion, for which A\$1.1 billion in financing was raised through a green loan provided by a range of international lenders
- Palisade Investment Partners launched an ~A\$1.1 billion debt refinancing linked to its renewables portfolio, whilst Igneo Infrastructure Partners reached financial close on an ~A\$990 million partial refinancing of its Atmos Renewables solar and wind portfolio
- In the telecommunications sector, TPG received RFPs from Uniti Group, Vocus Communications and Pacific Equity Partners for the sale of its fiber-to-the-building ("FTTB") wholesale broadband business, following its functional separation from TPG. The FTTB business, Vision Network, has ~135,000 customers and its network passes ~400,000 connections. Research analysts estimate the value of Vision Network at ~A\$950 million
- In the transport sector, a consortium of investors led by New Zealand Superannuation Fund launched the sale of its stake in the Melbourne based toll-road concession owner, ConnectEast Group. ConnectEast Group owns the 40km EastLink toll road concession and was listed up until 2011 when it was acquired for A\$2 billion. The motorway opened on June 29, 2008 and the concession expires on November 30, 2043
- A JV comprised of M Infrastructure Group and PT Asian Bulk Logistics reached financial close on the acquisition of Australian east coast rail haulage business, OneRail, from Aurizon

New York City Employees' Retirement System
Infrastructure Portfolio
As of March 31, 2023

Vintage Year	Investment	Closing Date	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Unfunded	TVPI	IRR
Active Investments:									
2013	Brookfield Infrastructure Fund II, L.P.	7/8/2013	\$75,000,000	\$67,369,337	\$70,218,660	\$64,232,361	\$13,267,706	2.0x	12.9%
2014	IFM Global Infrastructure Fund	1/2/2014	\$75,000,000	\$100,136,579	\$45,514,670	\$149,787,858	-	2.0x	11.7%
2014	Global Energy & Power Infrastructure Fund II	4/16/2014	\$45,000,000	\$49,083,529	\$48,680,677	\$15,059,158	\$1,342,224	1.3x	13.8%
2014	KKR Global Infrastructure Investors II L.P.	6/12/2015	\$77,000,000	\$82,920,354	\$119,017,418	\$37,043,489	\$3,256,291	1.9x	18.4%
2016	Global Infrastructure Partners III-A/B, L.P.	1/29/2016	\$106,000,000	\$107,818,639	\$50,442,665	\$110,149,774	\$11,505,540	1.5x	10.5%
2016	Brookfield Infrastructure Fund III, L.P.	4/15/2016	\$91,000,000	\$71,124,762	\$24,866,276	\$75,564,481	\$31,463,537	1.4x	10.5%
2016	Actis Energy 4	12/16/2016	\$64,300,000	\$64,389,504	\$79,942,705	\$12,221,000	\$24,387,856	1.4x	14.0%
2017	EQT Infrastructure III (No.2) SCSp	2/18/2017	\$56,302,055	\$64,384,613	\$88,213,936	\$31,197,579	\$3,164,888	1.9x	20.9%
2016	ASF VII Infrastructure L.P.	4/24/2017	\$66,000,000	\$51,245,499	\$19,916,196	\$54,979,880	\$15,932,351	1.5x	15.7%
2017	Axium Infrastructure North America (2017)	8/14/2017	\$67,104,915	\$70,180,503	\$20,878,682	\$75,005,969	-	1.4x	8.6%
2017	NYCRS EIG Energy Partners, L.P.	8/14/2017	\$65,880,000	\$40,120,740	\$23,003,536	\$23,509,144	\$29,117,184	1.2x	7.6%
2022	NYCRS EIG Energy Partners Co-Investment, L.P.	1/12/2018	\$16,470,000	-	-	-	\$16,470,000	-	0.0%
2018	KKR Global Infrastructure Investors III L.P.	3/29/2018	\$87,500,000	\$76,930,413	\$19,881,582	\$71,285,352	\$14,943,560	1.2x	8.4%
2019	Global Energy & Power Infrastructure Fund III, L.P.	7/3/2018	\$87,500,000	\$74,866,314	\$13,765,595	\$76,909,448	\$17,101,369	1.2x	13.1%
2018	Cardinal NR Sidecar Holdings L.P.	10/5/2018	\$10,500,000	\$10,570,919	\$3,490,771	\$16,536,492	-	1.9x	17.5%
2018	EQT Infrastructure IV (No.2) USD SCSp	12/20/2018	\$101,500,000	\$93,098,035	\$16,213,559	\$104,556,208	\$19,493,115	1.3x	11.6%
2019	Ardian Infrastructure Fund V B	3/4/2019	\$72,323,739	\$50,151,193	\$1,933,987	\$59,542,989	\$22,571,793	1.2x	15.5%
2018	Global Infrastructure Partners IV-A/B, L.P.	3/11/2019	\$117,400,000	\$89,924,133	\$531,588	\$95,729,673	\$33,486,453	1.1x	5.9%
2019	Brookfield Infrastructure Fund IV, L.P.	5/10/2019	\$101,000,000	\$95,993,309	\$20,476,687	\$102,436,502	\$11,638,833	1.3x	13.4%
2020	EQT Infrastructure IV Co-Investment (B) SCSp (Saber)	7/30/2019	\$8,400,000	\$8,484,000	\$509,835	\$10,401,518	-	1.2x	8.9%
2019	Brookfield Infrastructure Fund IV Co-Investment (Snow)	10/25/2019	\$10,000,000	\$10,051,289	\$1,435,734	\$14,416,963	-	1.6x	15.5%
2020	EQT Infrastructure IV Co-Investment (G) SCSp (Lightspeed)	6/11/2020	\$12,712,770	\$12,754,645	-	\$16,606,845	-	1.3x	10.2%
2020	Actis Energy 5	6/30/2020	\$113,000,000	\$15,307,260	-	\$6,905,000	\$97,692,740	0.5x	-73.5%
2020	BIS NYC Infrastructure Emerging Manager Opportunities Fund, L.P.	7/3/2020	\$71,660,000	\$16,669,649	-	\$17,576,040	\$54,990,351	1.1x	5.6%
2020	EQT Infrastructure IV Co-Investment (F) SCSp (Connect)	8/18/2020	\$15,700,000	\$14,278,244	-	\$24,239,726	\$1,468,928	1.7x	28.2%
2020	EQT Infrastructure V (No.2) USD SCSp	10/29/2020	\$135,000,000	\$96,067,985	\$9,870,450	\$94,199,327	\$47,157,381	1.1x	9.0%
2021	Basalt Infrastructure Partners III	2/5/2021	\$114,000,000	\$76,990,178	-	\$82,844,510	\$37,009,822	1.1x	6.4%
2021	Stonepeak Infrastructure Fund IV, L.P.	2/16/2021	\$171,000,000	\$75,402,781	\$483,443	\$81,951,935	\$95,607,819	1.1x	9.1%
2021	Stonepeak Tiger (Co-Invest) Holdings (I-B) LP	4/16/2021	\$23,500,000	\$19,882,322	-	\$20,066,360	\$3,617,678	1.0x	0.6%
2021	KKR Global Infrastructure Investors IV (USD) SCSp	5/24/2021	\$205,000,000	\$86,073,172	\$1,086,420	\$79,439,382	\$120,023,203	0.9x	-10.6%
2021	ASF VIII Infrastructure B L.P.	8/3/2021	\$147,000,000	\$17,026,838	\$3,028,517	\$15,050,628	\$129,973,162	1.1x	6.8%
2021	Axium Infrastructure North America (2021)	9/3/2021	\$93,630,688	\$95,530,934	\$3,069,783	\$96,301,882	-	1.0x	8.6%
2021	Stonepeak Patagonia (Co-Invest) Holdings LP (Project Panther)	12/10/2021	\$27,495,000	\$24,807,788	-	\$28,767,863	\$2,687,212	1.2x	24.6%
2022	Ardian Infra Fund V Co-Invest Eden	2/21/2022	\$23,471,943	\$23,471,943	-	\$26,196,942	-	NM	NM
2022	InfraVia European Fund V SCSp	2/25/2022	\$127,979,191	\$34,116,435	\$642,489	\$32,593,217	\$93,625,452	NM	NM
2022	Blackrock Global Infrastructure Fund IV	6/30/2022	\$134,000,000	\$8,793,158	-	\$7,531,933	\$125,206,842	NM	NM
2022	Brookfield Infrastructure Fund V, LP	7/18/2022	\$167,690,000	-	-	(\$1,165,421)	\$167,690,000	NM	NM
2022	BIP III Ride Co-Investment L.P. (Project Ride)	8/2/2022	\$16,771,505	\$16,771,505	-	\$18,650,574	-	NM	NM
2022	Basalt Infrastructure Partners IV A L.P.	10/7/2022	\$167,700,000	-	-	-	\$167,700,000	NM	NM
2022	DIF Infrastructure VII SCSp	11/15/2022	\$109,761,730	-	-	(\$1,456,587)	\$109,761,730	NM	NM
2022	Ardian Infra Fund V Co-Invest Lemon	12/22/2022	\$18,200,660	\$16,540,414	-	\$16,926,569	\$1,858,342	NM	NM
2023	EQT Infrastructure VI (No.2) USD SCSp	3/1/2023	\$162,000,000	-	-	-	\$162,000,000	NM	NM
2023	Global Infrastructure Partners V-A/B, L.P.	3/31/2023	\$162,000,000	-	-	-	\$162,000,000	NM	NM
Total			\$3,620,454,196	\$1,929,328,913	\$687,115,861	\$1,863,792,563	\$1,849,213,362	1.3x	12.2%

Note: IRRs presented are interim estimates and may not be indicative of the ultimate performance of fund investments due to a number of factors, such as the lack of industry valuation standards and the differences in the investment pace and strategy of various funds. Until a fund is liquidated, typically over 10 to 12 years, the IRR is only an interim estimated return. The IRR calculated in the early years of a fund is usually not meaningful given the J-Curve effect. The actual IRR performance of any fund is not known until all capital contributed and earnings have been distributed to the investor. The IRRs contained in this report are calculated by StepStone Group LP, a consultant to the New York City Retirement Systems, based on information provided by the general partners of each investment (e.g. cash flows and valuations). The IRR calculations and other information contained in this report have not been reviewed or confirmed by the general partners. The result of the IRR calculation may differ from that generated by the general partner or other limited partners. Differences in IRR calculations can be affected by cash-flow timing, the accounting treatment of carried interest, fund management fees, advisory fees, organizational fees, other fund expenses, sale of distributed stock, and valuations.

Risk Quarterly Report (Public):

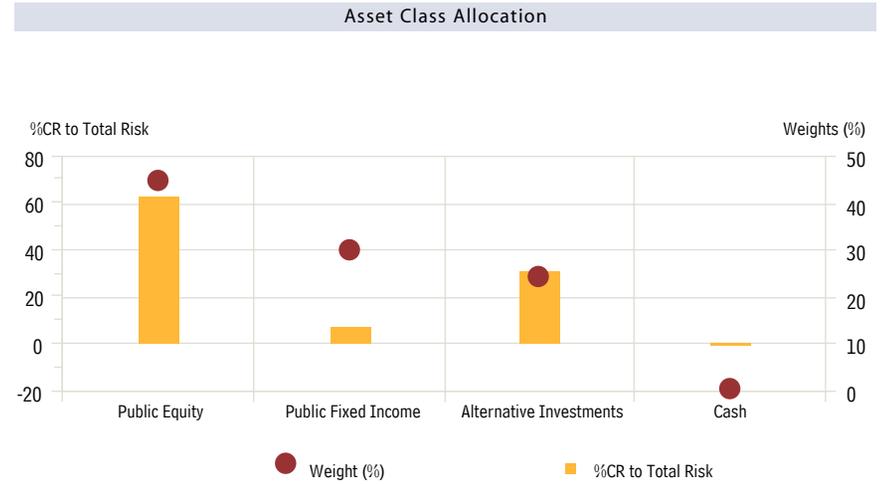
BarraOne Total Plan Summary

COMPANY: NYCRS - NYCERS
 PORTFOLIO: NYCERS_Plan3
 BENCHMARK: NYCERS_Policy3
 POSITIONS: 31,041

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 79,798,349,134
 ACCEPTED: 30,543

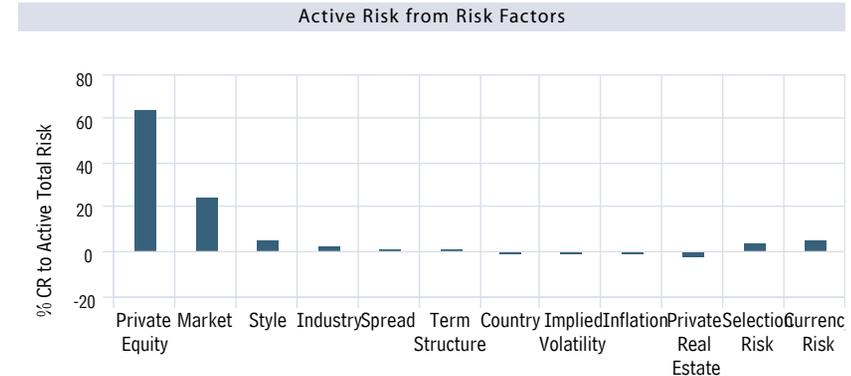
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	12.17	Total	79,798,349,134	100.00	12.17	12.17	100.00
Benchmark Risk	11.06	Public Equity	35,836,004,519	44.91	17.40	7.63	62.69
Active Risk	2.18	Public Fixed Income	24,045,016,909	30.13	5.56	0.86	7.05
Portfolio Beta	1.09	Alternative Investments	19,625,319,897	24.59	16.02	3.68	30.26
Effective Duration	1.91	Cash	292,007,809	0.37	0.06	-0.00	-0.00



Risk Factor Breakdown

Risk Source	Risk Decomposition			Risk Decomposition		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	12.17	100.00	1.00	2.18	100.00	1.00
Local Market Risk	11.50	94.47	1.00	2.09	95.57	0.99
Common Factor Risk	11.47	94.24	1.00	2.01	92.30	0.97
Private Real Estate	0.61	5.03	0.70	-0.06	-2.61	-0.12
Implied Volatility	0.02	0.13	0.45	-0.00	-0.04	-0.20
Industry	0.09	0.73	0.18	0.05	2.40	0.19
Inflation	0.07	0.56	0.41	-0.02	-0.76	-0.17
Market	9.53	78.28	0.97	0.52	23.93	0.47
Private Equity	0.25	2.07	0.14	1.40	64.32	0.80
Spread	0.58	4.75	0.70	0.01	0.42	0.12
Style	0.10	0.78	0.24	0.10	4.39	0.24
Term Structure	0.24	1.96	0.13	0.01	0.28	0.06
Selection Risk	0.03	0.23	0.05	0.07	3.27	0.18
Currency Risk	0.67	5.53	0.57	0.10	4.43	0.33



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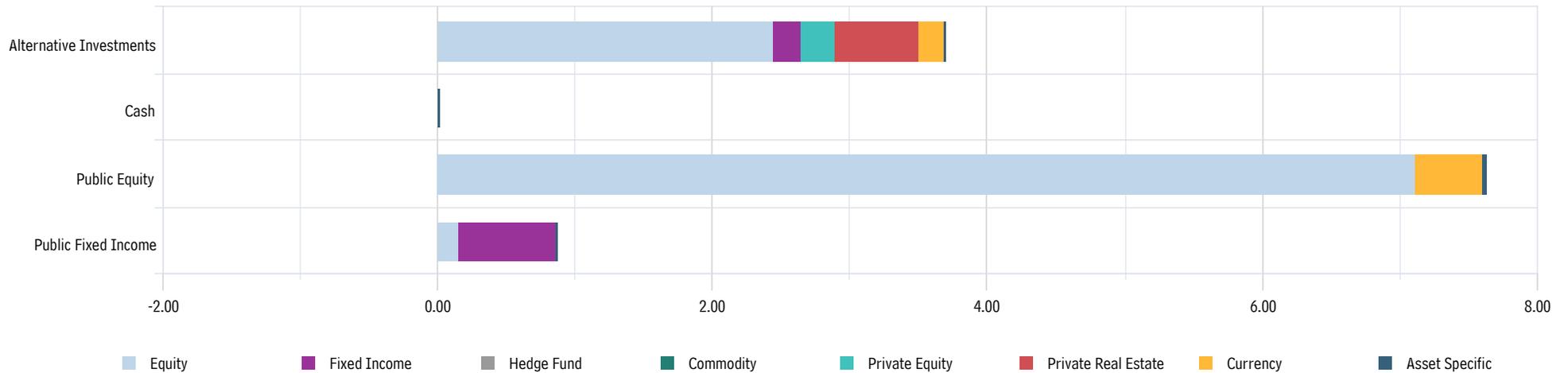
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Risk Contribution Breakdown by Risk Type

Asset Name	Mkt Value	Weight (%)	Eff Weight (%)	Total Risk	%CR to Total Risk	Port Risk Contribution	Risk Contribution								
							Equity	Fixed Income	Hedge Fund	Commodity	Private Real Estate	Private Equity	Currency	Asset Specific	
Total	79,798,349,134	100.00	-	12.17	100.00	12.17	9.71	0.90	0.00	0.00	0.00	0.61	0.25	0.67	0.03
Alternative Investments	19,625,319,897	24.59	-	16.02	30.26	3.68	2.44	0.19	0.00	0.00	0.00	0.61	0.25	0.18	0.00
Cash	292,007,809	0.37	-	0.06	-0.00	-0.00	0.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Equity	35,836,004,519	44.91	-	17.40	62.69	7.63	7.11	-0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.02
Public Fixed Income	24,045,016,909	30.13	-	5.56	7.05	0.86	0.15	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00



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Allocation Selection

Asset Class	Active Weight(%)	Allocation			Selection			Active	
		Volatility	Correlation	Risk Contribution	Volatility	Correlation	Risk Contribution	Risk Contribution	
Active Total Risk				0.04			2.15	2.18	
Alternative Investments	-0.91	3.55	-0.29	0.01	8.55	0.98	2.06	2.07	
Cash	0.37	11.07	-0.44	-0.02	0.28	0.05	0.00	-0.02	
Public Equity	0.91	6.85	0.47	0.03	0.91	0.20	0.08	0.11	
Public Fixed Income	-0.37	9.32	-0.41	0.01	0.35	0.01	0.00	0.02	



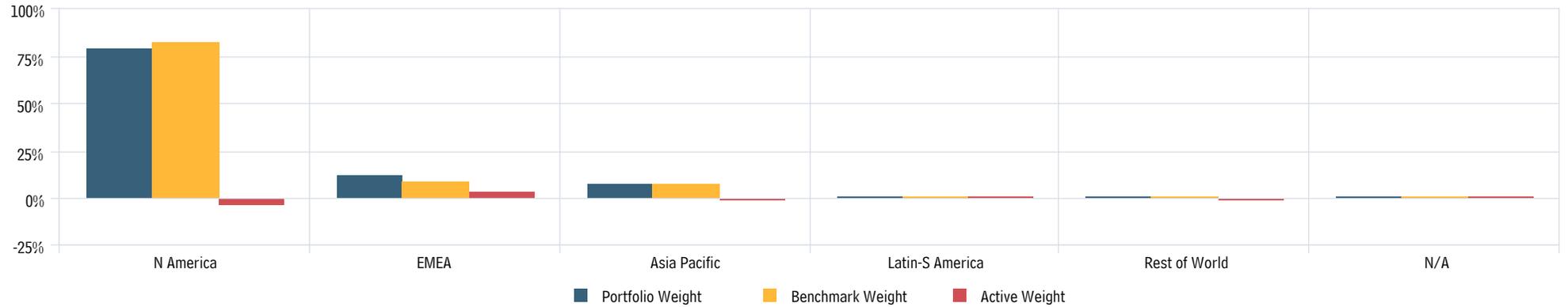
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Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	12.17	2.18	100.00	0.02
N America	79.01	82.41	-3.40	11.51	1.83	83.85	0.01
EMEA	12.17	8.94	3.23	18.16	0.32	14.79	0.04
Asia Pacific	7.69	7.83	-0.14	16.36	0.02	0.81	0.02
Latin-S America	0.62	0.50	0.12	25.26	0.00	0.09	0.04
Rest of World	0.27	0.31	-0.04	9.15	0.00	0.08	-0.02
N/A	0.23	0.00	0.23	17.40	0.01	0.38	0.03



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Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	12.17	2.18	100.00	0.02
United States	76.97	80.43	-3.46	11.45	1.79	81.87	0.01
United Kingdom	3.20	2.09	1.11	18.34	0.11	5.11	0.04
Japan	2.07	2.56	-0.49	16.74	0.00	0.07	0.01
Germany	1.43	0.98	0.45	20.68	0.03	1.48	0.05
France	1.42	1.38	0.04	19.88	0.01	0.52	0.05
Canada	1.39	1.82	-0.43	14.26	0.02	0.77	0.02
China International	1.25	1.24	0.01	27.78	-0.01	-0.47	0.02
Switzerland	1.14	1.13	0.01	17.17	0.02	0.86	0.02
India	1.06	0.74	0.32	20.35	0.01	0.48	0.02
Netherlands	0.99	0.60	0.39	23.02	0.03	1.35	0.05
Taiwan	0.95	0.79	0.16	24.17	0.00	0.21	0.03
S. Korea	0.86	0.62	0.24	25.27	0.01	0.50	0.05
Australia	0.58	0.86	-0.28	21.70	-0.01	-0.28	0.04
Italy	0.57	0.36	0.21	21.85	0.02	0.75	0.05
Spain	0.56	0.32	0.24	18.09	0.02	0.75	0.04
Sweden	0.55	0.35	0.20	26.49	0.02	1.08	0.08
Denmark	0.54	0.33	0.20	20.99	0.02	0.82	0.04
Brazil	0.49	0.30	0.20	33.15	0.01	0.40	0.04
Euro. Monetary Union	0.45	0.00	0.45	25.94	0.03	1.43	0.06
Hong Kong	0.42	0.30	0.13	23.43	0.00	0.15	0.00
Ireland	0.36	0.29	0.07	13.90	0.00	0.19	0.01
Singapore	0.27	0.19	0.07	15.06	0.00	0.10	0.00
N/A	0.23	0.00	0.23	17.40	0.01	0.37	0.04
Belgium	0.22	0.15	0.07	16.97	0.00	0.13	0.02
China	0.21	0.32	-0.11	27.42	0.01	0.34	-0.01
Mexico	0.21	0.16	0.05	22.39	0.00	0.10	0.03
Luxembourg	0.18	0.21	-0.03	7.50	0.00	0.07	-0.03
Indonesia	0.15	0.10	0.05	21.43	0.00	0.05	0.02
South Africa	0.12	0.16	-0.04	28.11	-0.00	-0.12	0.06
Thailand	0.11	0.10	0.01	22.04	0.00	0.03	0.02



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Portfolio Allocation by Currency

Exposure by Market



Developed Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	63,163,186,787.04	83.08	72.32
Euro	4,839,110,556.69	7.36	8.94
British Pound Sterling	2,161,515,991.09	5.26	3.95
Japanese Yen	1,608,355,866.70	-0.15	2.02
Hong Kong Dollar	1,162,211,001.93	-0.10	1.61

Emerging Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
Indian Rupee	845,465,742.62	0.47	1.06
New Taiwan Dollar	753,446,065.47	0.21	1.19
Korean Won	644,830,895.55	0.41	1.26
Brazilian Real	383,395,642.86	0.40	0.66
Chinese Yuan	162,264,326.57	0.25	0.24

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)								
	Portfolio	Benchmark	Active	Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)	
Total	100.00	100.00	0.00	12.17	12.17	100.00	2.18	100.00	
US Dollar	79.15	83.14	-3.99	11.27	8.80	72.32	1.81	83.08	
Euro	6.06	3.64	2.42	20.32	1.09	8.94	0.16	7.36	
British Pound Sterling	2.71	1.58	1.13	21.07	0.48	3.95	0.11	5.26	
Japanese Yen	2.02	2.41	-0.39	17.14	0.25	2.02	-0.00	-0.15	
Hong Kong Dollar	1.46	1.43	0.02	28.61	0.20	1.61	-0.00	-0.10	
Swiss Franc	1.08	1.08	0.00	16.78	0.15	1.22	0.01	0.57	
Indian Rupee	1.06	0.73	0.33	20.41	0.13	1.06	0.01	0.47	
Canadian Dollar	0.95	1.26	-0.30	19.38	0.17	1.36	0.01	0.47	
New Taiwan Dollar	0.94	0.78	0.16	24.28	0.14	1.19	0.00	0.21	
Korean Won	0.81	0.62	0.19	25.34	0.15	1.26	0.01	0.41	
Australian Dollar	0.55	0.79	-0.24	22.95	0.11	0.88	-0.01	-0.35	
Danish Krone	0.53	0.33	0.21	21.02	0.08	0.70	0.02	0.82	
Brazilian Real	0.48	0.28	0.21	33.88	0.08	0.66	0.01	0.40	
Swedish Krona	0.46	0.35	0.11	26.87	0.10	0.86	0.02	0.77	
Singapore Dollar	0.24	0.13	0.11	16.22	0.03	0.23	0.00	0.05	



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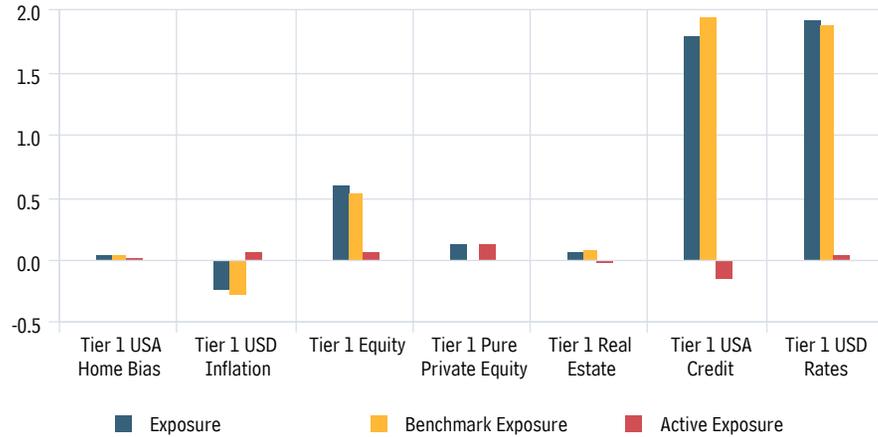
BarraOne Tier 1 USA Factor Summary

Tier 1 factors describe the most important drivers of the markets and provide a platform for the factor-based asset-allocation framework. They provide a lens for strategic asset allocation and are designed for board level reporting.

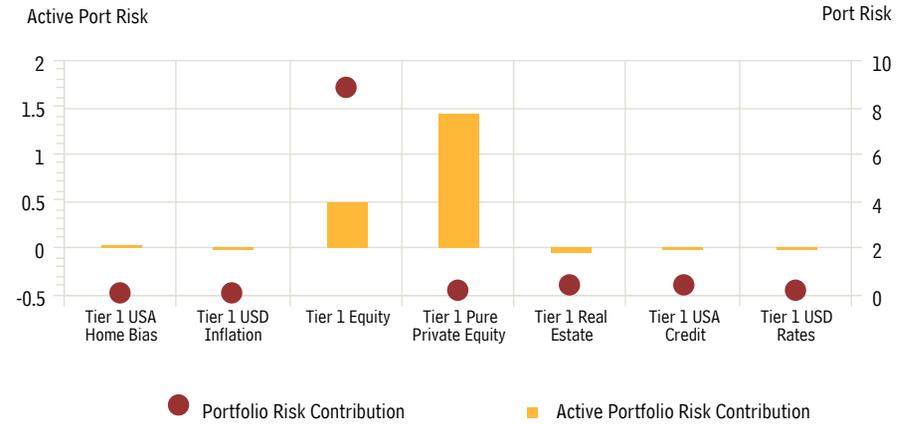
COMPANY: NYCERS - NYCERS
 PORTFOLIO: NYCERS_Plan3
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 POSITIONS: 31,041
 MODEL: MAC.L Tier 1 USA

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Macro Factor Exposures



Macro Factor Risk Contribution



BarraOne Tier 1 USA Factor Summary

Tier 1 factors describe the most important drivers of the markets and provide a platform for the factor-based asset-allocation framework. They provide a lens for strategic asset allocation and are designed for board level reporting.

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Risk Source	Risk Decomposition						
	Exposure			Contribution			
	Exposure	Benchmark Exposure	Active Exposure	Portfolio Risk Contribution	% Portfolio Risk	Active Portfolio Risk Contribution	% Active Risk
Total Risk	-	-	-	12.17	100.00	2.18	100.00
Local Market Risk	-	-	-	11.50	94.47	2.09	95.57
Common Factor Risk	-	-	-	11.47	94.24	2.01	92.30
Country	-	-	-	0.12	0.98	0.00	0.01
Tier 1 USA Home Bias	0.04	0.04	0.00	0.12	0.98	0.00	0.01
Factor Residual Risk	-	-	-	0.98	8.08	0.20	9.20
Inflation	-	-	-	0.06	0.47	-0.01	-0.37
Tier 1 USD Inflation	-0.23	-0.29	0.06	0.06	0.47	-0.01	-0.37
Interaction within Common Factor	-	-	-	N/A	-	N/A	-
Market	-	-	-	8.88	72.98	0.50	22.77
Tier 1 Equity	0.59	0.53	0.07	8.88	72.98	0.50	22.77
Private Equity	-	-	-	0.25	2.07	1.41	64.45
Tier 1 Pure Private Equity	0.12	0.00	0.12	0.25	2.07	1.41	64.45
Private Real Estate	-	-	-	0.44	3.63	-0.06	-2.66
Tier 1 Real Estate	0.07	0.09	-0.02	0.44	3.63	-0.06	-2.66
Spread	-	-	-	0.49	4.01	-0.02	-1.09
Tier 1 USA Credit	1.79	1.95	-0.16	0.49	4.01	-0.02	-1.09
Term Structure	-	-	-	0.25	2.04	-0.00	-0.01
Tier 1 USD Rates	1.92	1.87	0.05	0.25	2.04	-0.00	-0.01
Specific Risk	-	-	-	0.03	0.23	0.07	3.27
Currency Risk	-	-	-	0.67	5.53	0.10	4.43
Currency/Market Interaction	-	-	-	N/A	-	N/A	-

Tier 1 Macro Factor Scheme has six factors		
Tier 1 Factor	Exposure Type	Description
Equity	Membership (weights)	USA Equity
Pure Private Equity	Membership (weights)	USA Private Equity
Real Estate	Membership (weights)	USA Real Estate
USA Credit	Sensitivities (durations)	Sensitive to USA credit spreads
USD Inflation	Sensitivities (durations)	Sensitive to USD inflation protected assets
USD Rates	Sensitivities (durations)	Sensitive to Govt rate exposure
Commodities	Membership (weights)	Sensitive to Commodities
USA Home Bias		USA Home Bias factor returns is very similar to that of a portfolio long the MSCI USA IMI index and short the currency-hedged MSCI ACWI ex-US IMI index.

Factor Residual Risk				
Risk Source	Portfolio Risk Contribution	% Portfolio Risk	Active Portfolio Risk Contribution	% Active Risk
Basis	-0.00	-0.00	-0.00	-0.00
Country	-0.00	-0.03	-0.00	-0.03
Implied Volatility	0.02	0.13	-0.00	-0.04
Industry	0.09	0.73	0.05	2.40
Inflation	0.01	0.09	-0.01	-0.39
Interaction within Factor Residual Risk	N/A	-	N/A	-
Market	0.53	4.32	0.03	1.16
Private Equity	-0.00	-0.00	-0.00	-0.13
Private Real Estate	0.17	1.40	0.00	0.05
Spread	0.09	0.74	0.03	1.50
Style	0.10	0.78	0.10	4.39
Term Structure	-0.01	-0.08	0.01	0.29

BarraOne Total Plan Summary

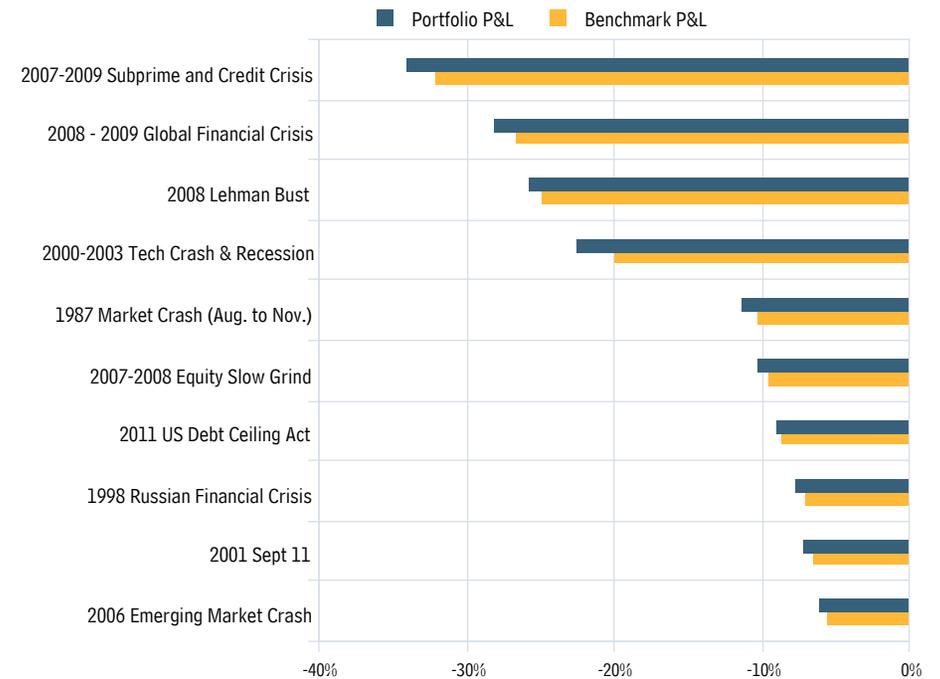
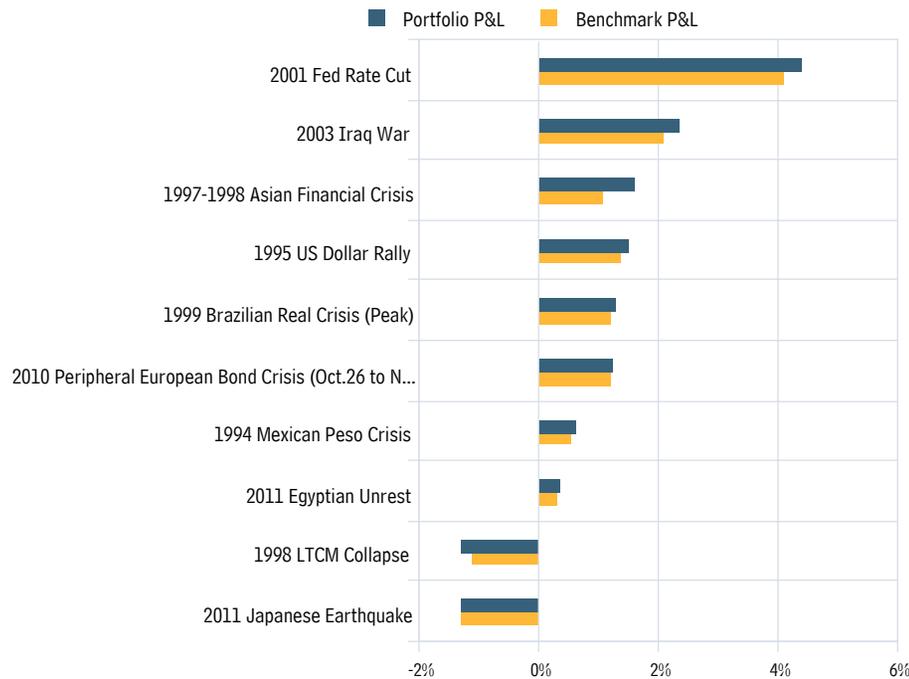
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Stress Scenarios

Top 10 Best Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
2001 Fed Rate Cut	4.40	4.09	3,514,607,207
2003 Iraq War	2.36	2.10	1,879,427,282
1997-1998 Asian Financial Crisis	1.58	1.06	1,260,649,139
1995 US Dollar Rally	1.51	1.38	1,208,658,929
1999 Brazilian Real Crisis (Peak)	1.27	1.20	1,013,589,757
2010 Peripheral European Bond Crisis (Oc	1.25	1.21	999,237,257
1994 Mexican Peso Crisis	0.62	0.55	493,847,909
2011 Egyptian Unrest	0.34	0.30	268,086,077
1998 LTCM Collapse	-1.28	-1.11	-1,023,329,080
2011 Japanese Earthquake	-1.30	-1.29	-1,038,374,902

Top 10 Worst Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
2007-2009 Subprime and Credit Crisis	-33.98	-32.08	-27,113,444,600
2008 - 2009 Global Financial Crisis	-28.05	-26.67	-22,383,312,799
2008 Lehman Bust	-25.77	-24.81	-20,561,728,844
2000-2003 Tech Crash & Recession	-22.52	-20.02	-17,967,881,156
1987 Market Crash (Aug. to Nov.)	-11.35	-10.23	-9,055,626,286
2007-2008 Equity Slow Grind	-10.33	-9.57	-8,239,236,308
2011 US Debt Ceiling Act	-8.96	-8.59	-7,146,880,461
1998 Russian Financial Crisis	-7.71	-7.07	-6,149,544,828
2001 Sept 11	-7.21	-6.49	-5,752,513,437
2006 Emerging Market Crash	-6.10	-5.50	-4,864,252,309



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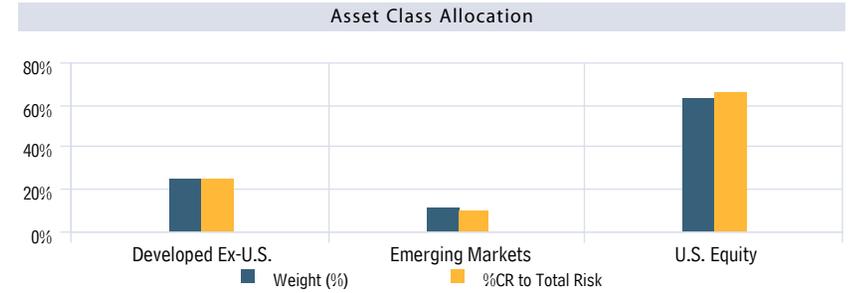
BarraOne Equity Summary

COMPANY: NYCERS - NYCERS
 PORTFOLIO: Public Equity
 BENCHMARK: Public Equity
 POSITIONS: 18,749
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 35,836,004,519
 ACCEPTED: 18,484

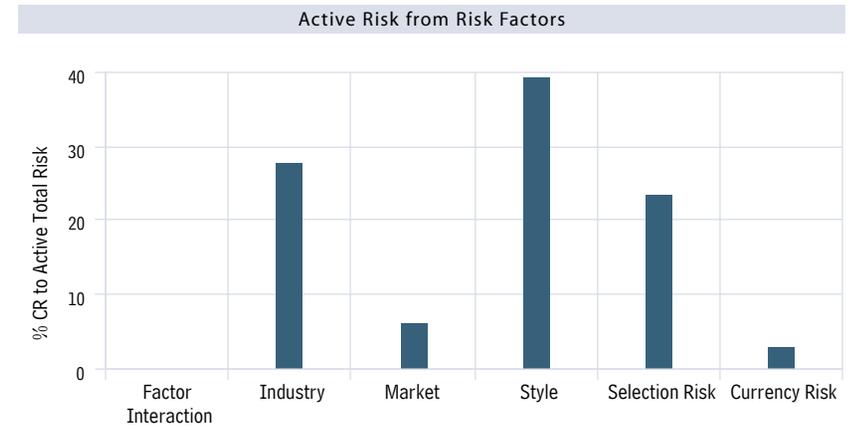
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	17.40	Total	35,836,004,519	100.00	17.40	17.40	100.00
Benchmark Risk	17.40	Developed Ex-U.S.	9,162,555,362	25.57	18.01	4.33	24.86
Active Risk	0.91	Emerging Markets	3,906,190,915	10.90	18.48	1.68	9.64
Portfolio Beta	1.00	U.S. Equity	22,767,258,243	63.53	18.30	11.39	65.49



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	17.40	100.00	1.00	0.91	100.00	1.00
Local Market Risk	16.35	94.01	1.00	0.88	96.99	0.98
Common Factor Risk	16.27	93.52	0.99	0.67	73.56	0.85
Country	-0.01	-0.04	-0.04	0.00	0.33	0.07
Industry	0.12	0.68	0.13	0.25	27.73	0.55
Market	16.15	92.84	0.99	0.06	6.16	0.20
Style	0.01	0.04	0.01	0.36	39.35	0.61
Selection Risk	0.08	0.49	0.07	0.21	23.42	0.48
Currency Risk	1.04	5.99	0.54	0.03	3.01	0.14



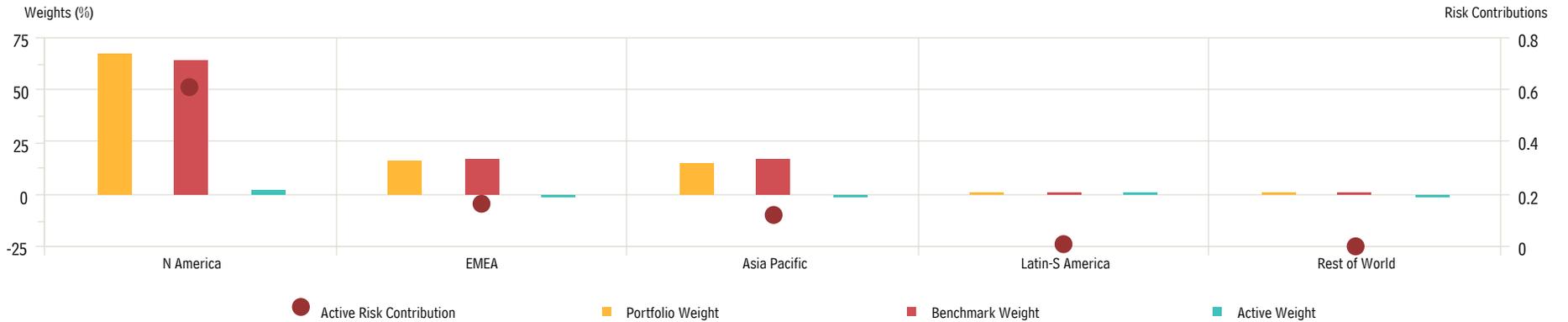
BarraOne Equity Summary

COMPANY: NYCRS - NYCERS
 PORTFOLIO: Public Equity
 BENCHMARK: Public Equity
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 MODEL: MAC.L

CURRENCY: USD
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Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	17.40	0.91	100.00	0.01
Asia Pacific	15.43	16.85	-1.42	17.06	0.12	13.37	-0.01
EMEA	16.03	17.17	-1.15	20.02	0.17	18.52	0.00
Latin-S America	1.04	1.02	0.02	27.38	0.00	0.48	0.00
N America	67.29	64.62	2.67	18.22	0.61	67.56	0.01
Rest of World	0.22	0.34	-0.12	16.08	0.00	0.07	-0.00



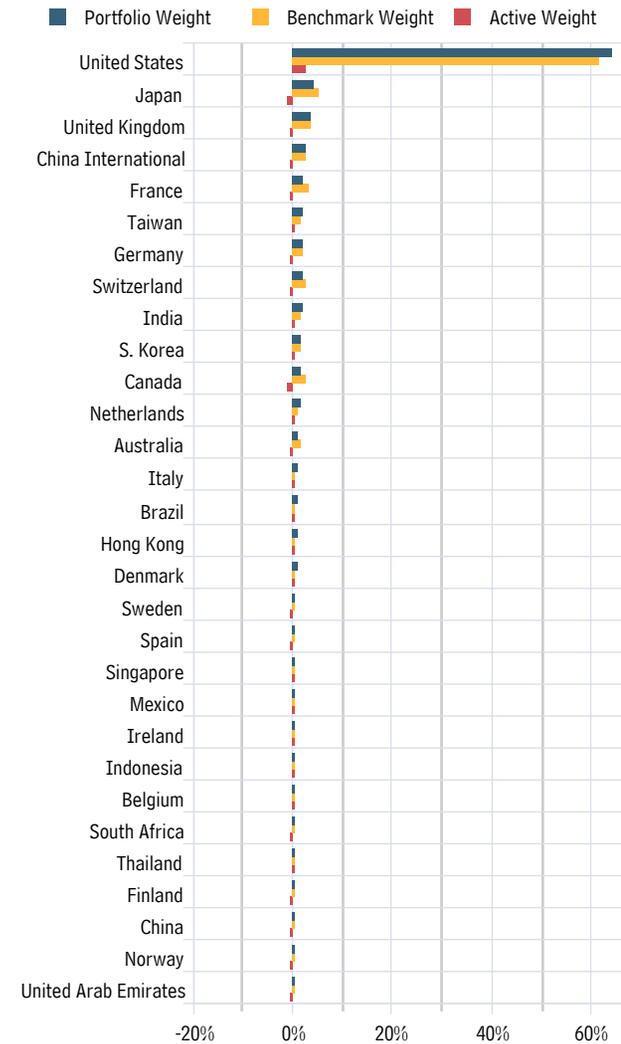
BarraOne Equity Summary

COMPANY: NYCERS - NYCERS
 PORTFOLIO: Public Equity
 BENCHMARK: Public Equity
 POSITIONS: 18,749
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
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 ACCEPTED: 18,484

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	17.40	0.91	100.00	0.01
United States	64.29	61.40	2.89	18.29	0.56	62.13	0.00
Japan	4.18	5.47	-1.30	17.74	0.06	6.28	-0.03
United Kingdom	3.55	3.59	-0.04	21.36	0.08	8.61	-0.01
China International	2.77	2.81	-0.04	27.79	0.01	1.64	-0.02
France	2.39	3.03	-0.65	20.79	0.02	1.94	-0.00
Taiwan	2.10	1.77	0.33	24.28	0.01	0.57	-0.00
Germany	2.08	2.10	-0.02	22.80	0.01	1.36	-0.00
Switzerland	2.04	2.46	-0.42	16.79	0.01	1.22	-0.01
India	1.91	1.66	0.25	20.63	0.02	1.85	0.01
S. Korea	1.86	1.40	0.46	25.65	0.01	0.59	-0.01
Canada	1.56	2.88	-1.32	19.81	0.03	3.71	-0.01
Netherlands	1.42	1.13	0.29	28.52	0.00	0.18	0.00
Australia	1.03	1.79	-0.76	23.86	0.02	1.98	-0.01
Italy	0.98	0.64	0.34	22.99	0.01	1.05	-0.00
Brazil	0.93	0.63	0.31	33.34	0.01	0.66	-0.00
Hong Kong	0.91	0.60	0.30	23.93	0.00	0.17	-0.01
Denmark	0.89	0.75	0.15	20.83	0.01	0.59	0.00
Sweden	0.78	0.79	-0.01	27.54	0.01	0.56	0.00
Spain	0.61	0.64	-0.03	20.99	0.01	0.92	-0.00
Singapore	0.50	0.30	0.20	16.53	0.00	0.12	-0.00
Mexico	0.38	0.32	0.06	25.08	0.00	0.09	-0.00
Ireland	0.32	0.23	0.09	28.13	0.01	0.60	0.02
Indonesia	0.31	0.22	0.10	21.69	0.00	0.11	0.00
Belgium	0.28	0.22	0.06	20.26	-0.00	-0.01	-0.01
South Africa	0.25	0.37	-0.11	28.71	0.00	0.06	-0.01
Thailand	0.25	0.23	0.02	22.04	0.00	0.09	-0.01
Finland	0.21	0.21	-0.00	25.20	0.00	0.28	0.01
China	0.19	0.55	-0.36	48.34	0.00	0.12	-0.01
Norway	0.16	0.16	-0.00	27.38	0.00	0.39	-0.03
United Arab Emirates	0.13	0.15	-0.02	20.03	-0.00	-0.00	0.00

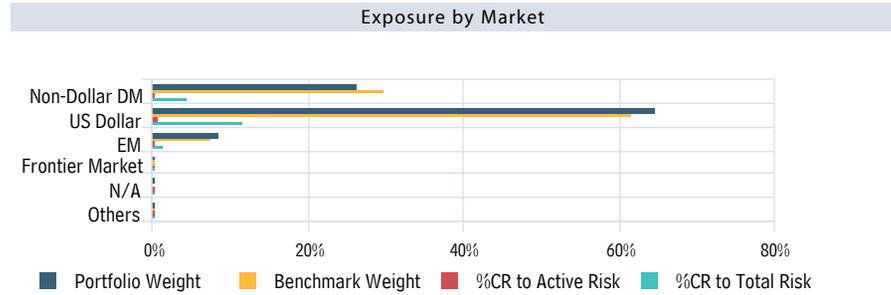


BarraOne Equity Summary

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 BENCHMARK: Public Equity
 POSITIONS: 18,749
 MODEL: MAC.L

CURRENCY: USD
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 MARKET VALUE: 35,836,004,519
 ACCEPTED: 18,484

Portfolio Allocation by Currency



Developed Market Currency				Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)	Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	23,206,404,786.19	62.63	66.73	New Taiwan Dollar	753,446,001.25	0.57	1.87
Euro	3,041,335,451.13	6.62	9.44	Indian Rupee	683,470,428.20	1.84	1.37
Japanese Yen	1,496,763,400.94	6.28	3.05	Korean Won	628,405,193.77	0.57	1.95
British Pound Sterling	1,254,931,207.14	8.58	3.68	Brazilian Real	334,056,075.87	0.66	0.94
Hong Kong Dollar	1,151,755,502.83	1.64	2.56	Mexican Peso	135,791,482.44	0.09	0.36

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	17.40	17.40	100.00	0.91	100.00
US Dollar	64.76	61.68	3.08	18.29	11.61	66.73	0.57	62.63
Euro	8.49	8.28	0.21	21.54	1.64	9.44	0.06	6.62
Japanese Yen	4.18	5.47	-1.30	17.74	0.53	3.05	0.06	6.28
British Pound Sterling	3.50	3.60	-0.09	21.44	0.64	3.68	0.08	8.58
Hong Kong Dollar	3.21	3.25	-0.04	28.71	0.45	2.56	0.01	1.64
New Taiwan Dollar	2.10	1.77	0.33	24.28	0.33	1.87	0.01	0.57
Swiss Franc	2.04	2.46	-0.42	16.78	0.28	1.61	0.01	1.22
Indian Rupee	1.91	1.66	0.25	20.63	0.24	1.37	0.02	1.84
Korean Won	1.75	1.40	0.36	25.58	0.34	1.95	0.01	0.57
Canadian Dollar	1.53	2.85	-1.33	19.57	0.26	1.51	0.03	3.78
Australian Dollar	1.03	1.79	-0.76	23.86	0.21	1.22	0.02	1.98
Brazilian Real	0.93	0.63	0.31	33.34	0.16	0.94	0.01	0.66
Danish Krone	0.89	0.75	0.15	20.83	0.14	0.78	0.01	0.59
Swedish Krona	0.58	0.79	-0.21	27.66	0.14	0.79	0.00	0.06
Singapore Dollar	0.50	0.30	0.20	16.51	0.06	0.34	0.00	0.12



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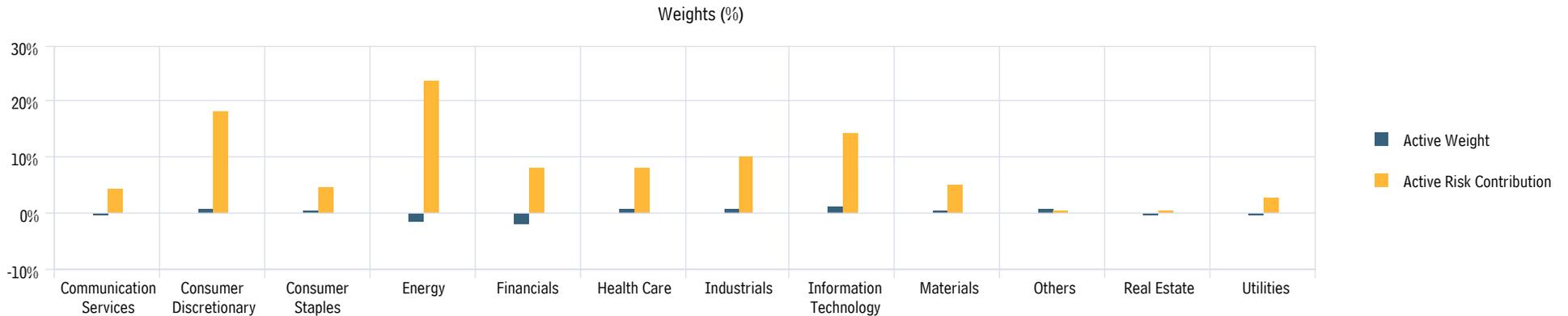
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CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 35,836,004,519
 ACCEPTED: 18,484

Portfolio Allocation by GICS Sector

GICS Sector	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	17.40	0.91	100.00	0.01
Communication Services	6.42	6.98	-0.56	22.58	0.04	4.46	-0.01
Consumer Discretionary	12.24	11.36	0.87	22.73	0.16	18.11	0.01
Consumer Staples	7.12	7.08	0.03	12.14	0.04	4.54	0.01
Energy	3.02	4.62	-1.60	28.04	0.22	23.85	-0.03
Financials	14.05	15.95	-1.90	19.97	0.07	8.10	0.01
Health Care	12.82	11.95	0.87	14.27	0.08	8.34	0.01
Industrials	12.11	11.14	0.97	19.16	0.09	10.03	0.01
Information Technology	21.82	20.82	1.00	22.26	0.13	14.31	-0.02
Materials	4.84	4.75	0.09	20.39	0.05	5.24	-0.00
Others	0.73	0.00	0.73	0.90	0.00	0.43	-0.00
Real Estate	2.24	2.56	-0.33	20.36	0.00	0.07	0.01
Utilities	2.60	2.78	-0.18	17.82	0.02	2.52	0.00



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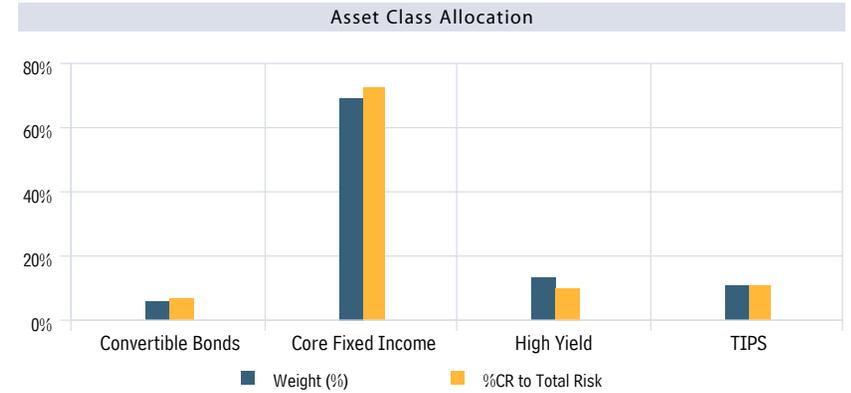
BarraOne Fixed Income Summary

COMPANY: NYCERS - NYCERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,817
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 24,045,016,909
 ACCEPTED: 11,594

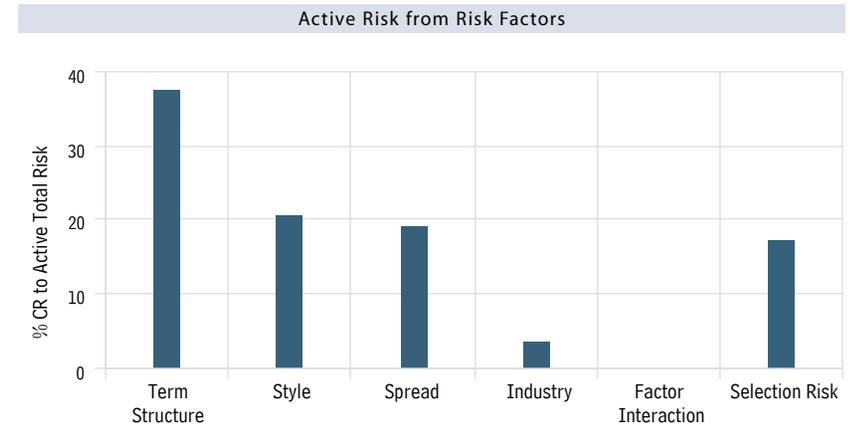
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	5.56	Total	24,045,016,909	100.00	5.56	5.56	100.00
Benchmark Risk	5.41	Convertible Bonds	1,431,176,134	5.95	11.70	0.35	6.37
Active Risk	0.35	Core Fixed Income	16,696,820,847	69.44	6.05	4.03	72.54
Portfolio Beta	1.03	High Yield	3,247,753,161	13.51	6.13	0.58	10.35
Cont. to Eff. Duration	5.78	TIPS	2,669,266,767	11.10	6.41	0.60	10.75
Convexity	0.67						
Yield to Worst (%)	4.88						
OAS to Swap (bp)	102.31						



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	5.56	100.00	1.00	0.35	100.00	1.00
Local Market Risk	5.56	99.99	1.00	0.35	99.99	1.00
Common Factor Risk	5.56	99.92	1.00	0.29	82.77	0.91
Implied Volatility	0.06	1.07	0.50	0.00	0.66	0.20
Industry	0.01	0.23	0.19	0.01	3.78	0.21
Inflation	-0.02	-0.32	-0.03	0.00	0.64	0.04
Market	0.15	2.77	0.35	0.00	1.04	0.07
Spread	0.48	8.59	0.25	0.07	19.02	0.32
Style	0.02	0.29	0.11	0.07	20.50	0.37
Term Structure	4.86	87.33	0.88	0.13	37.42	0.58
Selection Risk	0.00	0.07	0.03	0.06	17.22	0.41



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BarraOne Fixed Income Summary

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 BENCHMARK: Public Fixed Income
 POSITIONS: 11,817
 MODEL: MAC.L

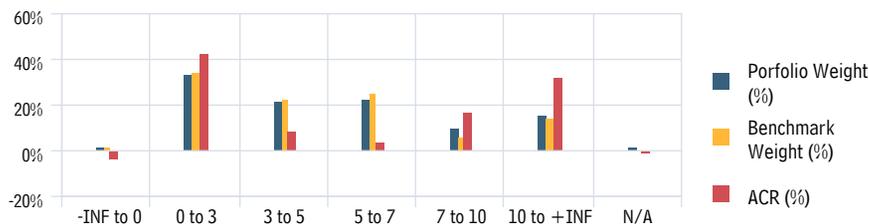
CURRENCY: USD
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 ACCEPTED: 11,594

Portfolio by Factor Breakdowns

Spread Factor	Volatility	Top 10 Spread Factor				Correlation	Contribution (Residual)			
		Exposure (Residual)					Active Port	to TR	to AR	to AR%
		Portfolio	Benchmark	Active	MCAR					
US Financials - Banking IG Spr	51.65	0.33	0.16	0.17	0.12	0.23	0.04	0.02	5.75	
US Agency MBS Prepayment 30Y	0.29	-0.12	0.00	-0.12	-0.00	-0.33	0.02	0.01	3.40	
US MBS All Spread	0.37	0.17	0.00	0.17	0.00	0.13	0.02	0.01	2.20	
US Agency MBS 30Y OAS	0.32	0.78	0.98	-0.20	-0.00	-0.08	0.07	0.01	1.42	
US Financials - Capital Market	48.13	0.12	0.08	0.04	0.11	0.23	0.02	0.00	1.33	
US Agency MBS GNMA Prepayment	0.42	-0.03	0.00	-0.03	-0.00	-0.36	0.01	0.00	1.22	
US Health Care - Pharmaceutica	54.21	0.13	0.09	0.03	0.10	0.19	0.02	0.00	0.97	
US Financials HY Spread	41.34	0.32	0.25	0.07	0.05	0.12	0.01	0.00	0.96	
US ABS Home Equity Spread	29.68	0.10	0.00	0.10	0.03	0.10	-0.00	0.00	0.88	
US Agency Spread	42.60	0.05	0.00	0.05	0.06	0.14	0.00	0.00	0.78	

Term Structure	Volatility	Top 10 Term Structure				Correlation	Contribution (Residual)			
		Exposure (Residual)					Active Port	to TR	to AR	to AR%
		Portfolio	Benchmark	Active	MCAR					
USD Rate 30Y	0.85	1.13	0.89	0.24	0.00	0.53	0.80	0.11	31.29	
USD Rate 10Y	1.06	1.19	1.10	0.09	0.00	0.45	1.10	0.04	11.76	
USD Rate 50Y	0.85	0.08	0.03	0.05	0.00	0.53	0.05	0.02	5.84	
USD Rate 5Y	1.16	1.33	1.29	0.04	0.00	0.33	1.28	0.02	4.71	
USD Muni Rates 20Y	1.04	0.01	0.00	0.01	0.00	0.44	0.01	0.00	1.02	
USD Muni Rates 10Y	1.06	0.01	0.00	0.01	0.00	0.44	0.00	0.00	0.68	
USD Muni Rates 5Y	1.12	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.19	
USD Muni Rates 2Y	1.18	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.04	
USD Rate 6M	1.04	0.01	0.00	0.00	0.00	0.08	0.00	0.00	0.03	
USD Muni Rates 1Y	1.13	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.02	

%CR to Active Risk by Duration Buckets



Key Rate Duration



BarraOne Fixed Income Summary

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 BENCHMARK: Public Fixed Income
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 MODEL: MAC.L

CURRENCY: USD
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Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	0.00	5.56	0.35	100.00	0.00
United States	94.83	94.17	0.66	5.60	0.34	95.60	0.03
United Kingdom	1.28	1.30	-0.02	5.73	-0.00	-0.28	0.02
Canada	1.11	1.16	-0.04	5.22	0.00	0.85	0.02
Ireland	0.50	0.45	0.05	6.15	-0.00	-0.15	0.02
Luxembourg	0.32	0.22	0.09	9.67	0.00	0.27	0.03
Spain	0.20	0.12	0.09	5.09	-0.00	-0.37	0.02
Netherlands	0.19	0.16	0.04	7.12	-0.00	-0.30	0.03
Bermuda	0.18	0.08	0.10	6.55	-0.00	-0.28	0.02
Japan	0.17	0.48	-0.31	4.63	0.00	0.81	0.02
Switzerland	0.16	0.12	0.04	5.03	-0.00	-0.53	0.03
Belgium	0.15	0.16	-0.01	12.70	0.00	0.27	0.05
Germany	0.11	0.07	0.04	8.19	0.00	0.41	0.03
Australia	0.11	0.16	-0.05	7.43	-0.00	-0.08	0.02
Israel	0.10	0.11	-0.01	5.97	0.00	0.96	-0.00
France	0.07	0.09	-0.02	10.06	-0.00	-0.15	0.03
Italy	0.07	0.11	-0.04	6.92	-0.00	-0.24	0.03
Chile	0.07	0.01	0.06	4.00	-0.00	-0.19	0.01
Singapore	0.06	0.19	-0.13	22.13	0.01	1.74	0.02
Caymans	0.06	0.05	0.01	8.65	0.00	0.08	0.02
Brazil	0.03	0.06	-0.03	7.91	-0.00	-0.20	0.03
World	0.03	0.00	0.03	2.53	-0.00	-0.14	0.01
United Arab Emirates	0.03	0.00	0.03	3.70	-0.00	-0.15	0.01
Malta	0.02	0.01	0.01	34.47	0.00	0.02	0.03
Liberia	0.02	0.02	-0.00	4.36	0.00	0.02	0.01
Hong Kong	0.02	0.05	-0.04	19.57	0.00	0.09	0.02
S. Korea	0.02	0.00	0.01	2.29	-0.00	-0.07	0.01
Taiwan	0.01	0.02	-0.01	3.97	-0.00	-0.14	0.03
Austria	0.01	0.01	0.01	10.71	0.00	0.01	0.03
Mexico	0.01	0.05	-0.04	6.63	-0.00	-0.27	0.04
India	0.01	0.03	-0.02	7.42	-0.00	-0.00	0.02



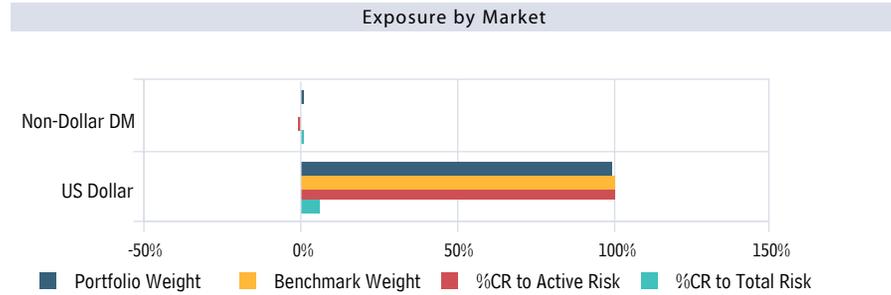
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BarraOne Fixed Income Summary

COMPANY: NYCERS - NYCERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,817
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 24,045,016,909
 ACCEPTED: 11,594

Portfolio Allocation by Currency



Developed Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	24,044,760,338.60	100.01	100.00
Canadian Dollar	185,820.50	-0.01	0.00
British Pound Sterling	50,897.23	-0.00	0.00
Euro	19,852.60	-0.00	0.00

Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)		Active	Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark						
Total	100.00	100.00	0.00	5.56	5.56	100.00	0.35	100.00
US Dollar	100.00	100.00	-0.00	5.56	5.56	100.00	0.35	100.01
Canadian Dollar	0.00	0.00	0.00	6.71	0.00	0.00	-0.00	-0.01
British Pound Sterling	0.00	0.00	0.00	53.56	0.00	0.00	-0.00	-0.00
Euro	0.00	0.00	0.00	7.34	0.00	0.00	-0.00	-0.00

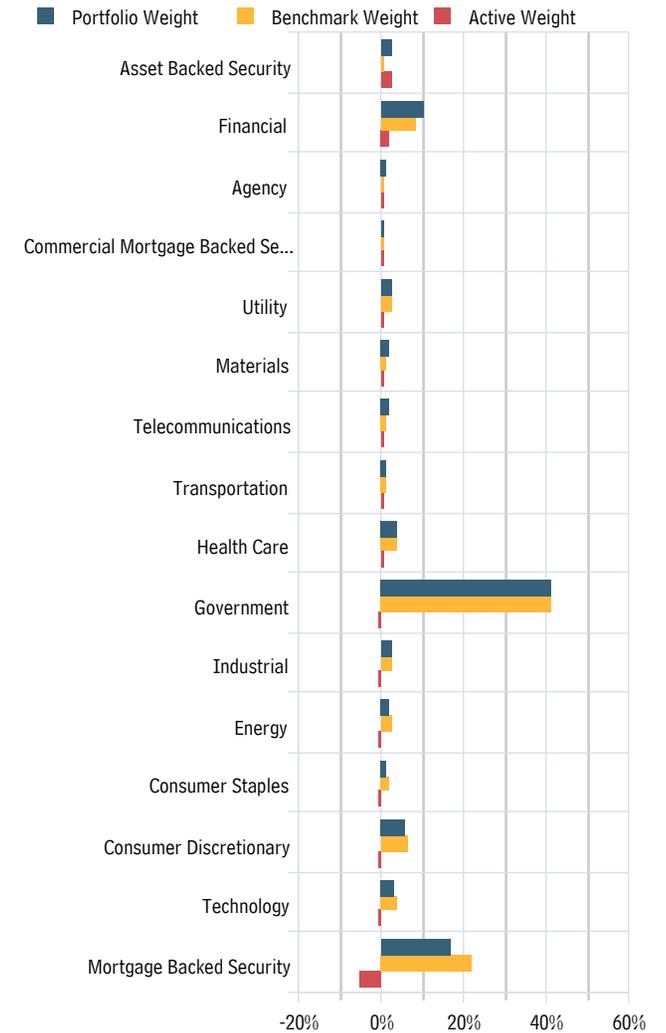
BarraOne Fixed Income Summary

COMPANY: NYCERS - NYCERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,817
 MODEL: MAC.L

CURRENCY: USD
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 ACCEPTED: 11,594

Portfolio Allocation by Bond Sector

Sector	Weight (%)			Cont. To Eff. Dur	Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	5.78	5.56	0.35	100.00	0.00
Government	41.47	41.56	-0.09	2.62	5.53	0.12	32.86	0.03
Mortgage Backed Security	17.01	21.90	-4.89	1.08	7.01	0.08	22.92	0.03
Financial	10.11	8.16	1.95	0.48	6.45	0.03	8.67	0.03
Consumer Discretionary	6.12	6.64	-0.52	0.28	8.28	0.06	15.81	0.02
Health Care	3.85	3.85	0.01	0.26	7.47	0.03	8.12	0.03
Technology	3.19	4.13	-0.94	0.15	7.60	0.05	13.58	0.01
Utility	2.74	2.33	0.41	0.16	7.80	0.01	1.62	0.04
Asset Backed Security	2.61	0.00	2.61	0.09	3.65	-0.01	-3.82	0.02
Industrial	2.59	2.72	-0.13	0.11	6.06	-0.00	-0.29	0.02
Energy	2.22	2.62	-0.39	0.11	6.23	-0.00	-0.73	0.02
Telecommunications	1.75	1.53	0.22	0.13	8.50	0.01	1.95	0.04
Materials	1.66	1.41	0.24	0.07	5.54	-0.00	-1.03	0.02
Consumer Staples	1.30	1.78	-0.48	0.09	7.05	-0.00	-0.35	0.03
Transportation	1.16	1.01	0.15	0.05	6.46	-0.01	-1.47	0.02
Agency	1.13	0.35	0.78	0.07	6.02	0.01	3.33	0.03
Commercial Mortgage Backed	0.68	0.00	0.68	0.01	2.19	-0.01	-2.76	0.01
Local/Provincial	0.29	0.02	0.26	0.02	6.18	0.00	0.81	0.03
Others	0.08	0.00	0.08	0.01	13.19	0.00	0.91	0.00
Supranational	0.03	0.00	0.03	0.00	2.53	-0.00	-0.14	0.01
Sovereign	0.01	0.00	0.01	0.00	6.87	0.00	0.01	0.02



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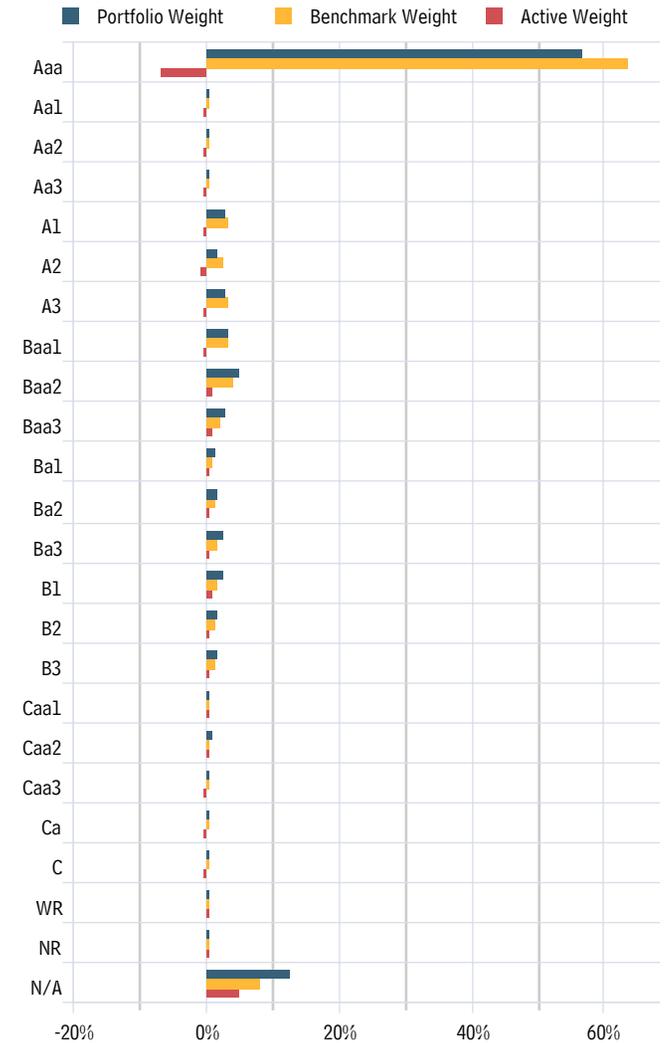
BarraOne Fixed Income Summary

COMPANY: NYCERS - NYCERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,817
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 24,045,016,909
 ACCEPTED: 11,594

Portfolio Allocation by Moody's Rating

Rating	Weight (%)			Cont. To Eff. Dur	Spread Duration	Total Risk	Active Risk CR	%CR to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	5.78	6.05	5.56	0.35	100.00
Aaa	56.68	63.36	-6.69	3.45	6.31	5.63	0.10	27.36
Aa1	0.02	0.02	-0.00	0.00	2.22	2.55	-0.00	-0.36
Aa2	0.11	0.53	-0.42	0.01	9.39	7.80	-0.01	-2.25
Aa3	0.34	0.55	-0.21	0.03	9.75	8.91	-0.00	-0.20
A1	2.62	3.20	-0.58	0.18	7.18	6.82	0.01	1.96
A2	1.57	2.45	-0.87	0.10	6.76	6.45	-0.01	-3.46
A3	2.65	3.03	-0.38	0.19	7.25	7.16	-0.01	-1.88
Baa1	3.22	3.38	-0.16	0.23	7.42	7.58	0.01	1.75
Baa2	4.64	3.94	0.70	0.35	7.90	8.10	0.05	12.87
Baa3	3.00	2.16	0.84	0.14	4.95	5.90	-0.01	-2.04
Ba1	1.11	0.90	0.21	0.05	5.37	6.63	-0.00	-0.36
Ba2	1.60	1.33	0.27	0.06	4.12	5.52	-0.00	-0.27
Ba3	2.35	1.80	0.55	0.08	3.72	5.13	-0.00	-0.80
B1	2.49	1.78	0.70	0.09	3.78	6.12	-0.00	-0.36
B2	1.75	1.22	0.54	0.06	3.49	6.17	-0.00	-0.32
B3	1.75	1.29	0.46	0.05	3.30	7.24	-0.00	-0.26
Caa1	0.58	0.46	0.12	0.02	3.38	10.42	0.00	0.06
Caa2	0.75	0.54	0.21	0.02	3.42	10.23	-0.00	-0.03
Caa3	0.04	0.07	-0.04	0.00	3.08	21.76	-0.00	-0.17
Ca	0.01	0.08	-0.07	0.00	2.93	21.15	-0.00	-0.07
C	0.00	0.01	-0.00	0.00	4.18	29.87	0.00	0.00
WR	0.09	0.05	0.04	0.00	4.51	6.27	0.00	0.00
NR	0.16	0.02	0.14	0.00	0.82	18.49	-0.00	-1.28
Not Rated	12.49	7.83	4.65	0.66	5.67	6.86	0.25	70.10



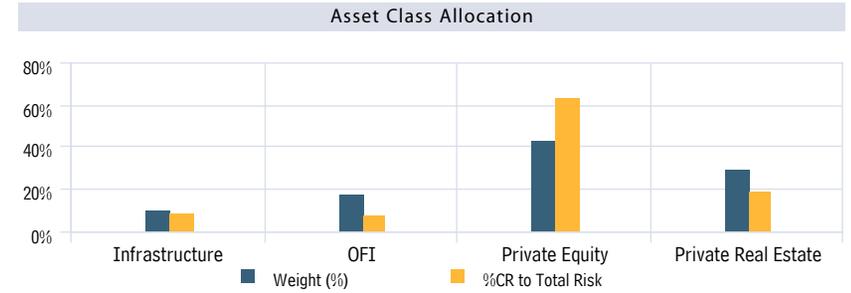
BarraOne Equity Summary

COMPANY: NYCRS - NYCERS
 PORTFOLIO: Alternative Investments
 BENCHMARK: Alternative Investments
 POSITIONS: 433
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 19,625,319,897
 ACCEPTED: 433

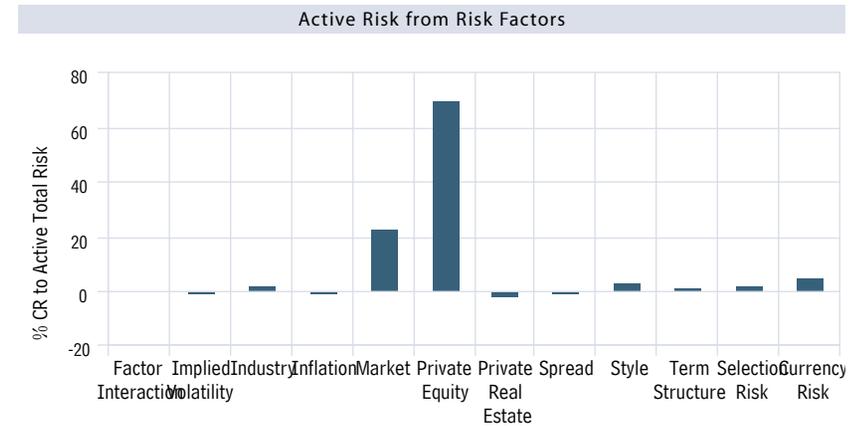
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	16.02	Total	19,625,319,897	100.00	16.02	16.02	100.00
Benchmark Risk	10.93	Infrastructure	1,947,205,163	9.92	15.69	1.43	8.92
Active Risk	8.55	OFI	3,518,887,148	17.93	8.35	1.24	7.72
Portfolio Beta	1.27	Private Equity	8,379,771,955	42.70	24.62	10.26	64.04
		Private Real Estate	5,779,455,631	29.45	13.48	3.10	19.32



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	16.02	100.00	1.00	8.55	100.00	1.00
Local Market Risk	15.40	96.12	1.00	8.11	94.84	0.99
Common Factor Risk	15.37	95.89	1.00	7.93	92.76	0.98
Private Real Estate	2.52	15.71	0.71	-0.20	-2.34	-0.12
Implied Volatility	-0.00	-0.01	-0.36	-0.01	-0.06	-0.21
Industry	0.18	1.10	0.21	0.15	1.74	0.18
Inflation	0.00	0.00	0.00	-0.07	-0.81	-0.16
Market	8.56	53.41	0.87	1.90	22.24	0.47
Private Equity	3.16	19.72	0.44	5.92	69.30	0.83
Spread	0.64	3.96	0.63	-0.01	-0.16	-0.05
Style	0.30	1.86	0.37	0.24	2.78	0.29
Term Structure	0.03	0.17	0.03	0.01	0.12	0.05
Selection Risk	0.04	0.23	0.05	0.18	2.08	0.14
Currency Risk	0.62	3.88	0.47	0.44	5.16	0.33



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BarraOne Equity Summary

COMPANY: NYCERS - NYCERS
 PORTFOLIO: Alternative Investments
 BENCHMARK: Alternative Investments
 POSITIONS: 433
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 19,625,319,897
 ACCEPTED: 433

Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	16.02	8.55	100.00	0.09
Asia Pacific	2.61	0.19	2.42	13.95	0.05	0.60	0.01
EMEA	16.33	1.92	14.41	19.66	1.30	15.23	0.06
Latin-S America	0.50	0.01	0.49	26.57	0.02	0.23	0.04
N America	79.35	97.65	-18.30	16.60	7.12	83.34	0.03
N/A	0.94	0.00	0.94	17.40	0.04	0.52	0.05
Rest of World	0.26	0.24	0.03	11.03	0.01	0.08	-0.01



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 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 19,625,319,897
 ACCEPTED: 433

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	16.02	8.55	100.00	0.09
United States	77.88	96.84	-18.95	16.62	6.96	81.48	0.07
United Kingdom	4.96	0.44	4.52	21.17	0.41	4.84	0.11
Germany	1.89	0.14	1.75	19.47	0.12	1.40	0.09
Euro. Monetary Union	1.87	0.00	1.87	25.51	0.14	1.64	0.11
Canada	1.42	0.78	0.64	17.41	0.16	1.87	0.09
France	1.34	0.08	1.27	21.13	0.11	1.29	0.11
Netherlands	1.21	0.21	1.00	20.01	0.07	0.77	0.08
N/A	0.94	0.00	0.94	17.40	0.04	0.52	0.08
Spain	0.90	0.01	0.89	21.75	0.08	0.98	0.13
India	0.83	0.02	0.81	21.17	0.02	0.27	0.06
Sweden	0.82	0.02	0.81	28.72	0.10	1.14	0.15
Switzerland	0.70	0.05	0.65	28.28	0.08	0.94	0.14
Japan	0.57	0.02	0.55	13.06	-0.00	-0.04	0.03
Denmark	0.55	0.00	0.55	26.62	0.05	0.63	0.14
China	0.51	0.00	0.51	16.41	0.00	0.05	0.05
Italy	0.43	0.17	0.26	25.73	0.04	0.51	0.09
Australia	0.34	0.08	0.27	19.70	0.02	0.18	0.06
Luxembourg	0.33	0.54	-0.21	6.08	0.01	0.06	0.02
Ireland	0.27	0.21	0.07	10.72	0.01	0.06	0.04
Brazil	0.26	0.01	0.25	42.80	0.02	0.18	0.10
Poland	0.22	0.00	0.22	29.72	0.02	0.25	0.13
Belgium	0.20	0.00	0.20	30.10	0.01	0.16	0.11
Norway	0.15	0.01	0.14	24.20	0.01	0.16	0.12
Israel	0.14	0.00	0.13	26.15	0.01	0.12	0.11
Mexico	0.13	0.00	0.13	14.00	0.00	0.02	0.05
Greece	0.10	0.00	0.10	30.85	0.01	0.12	0.14
New Zealand	0.10	0.01	0.08	23.66	0.00	0.05	0.07
Singapore	0.09	0.01	0.08	16.14	0.00	0.02	0.05
Colombia	0.09	0.00	0.09	30.33	0.00	0.03	0.07
Portugal	0.09	0.00	0.09	14.13	0.00	0.01	0.05



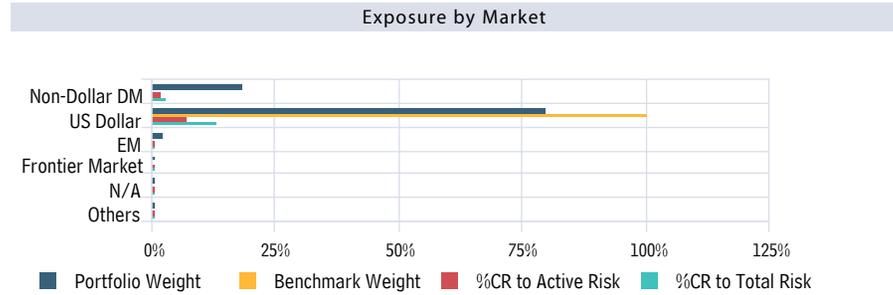
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BarraOne Equity Summary

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 POSITIONS: 433
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 19,625,319,897
 ACCEPTED: 433

Portfolio Allocation by Currency



Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	15,620,019,230.33	82.03	80.20
Euro	1,797,755,252.95	7.61	8.77
British Pound Sterling	906,533,886.72	4.88	4.89
Canadian Dollar	215,136,957.67	1.73	1.37
Swedish Krona	160,490,663.85	1.13	1.09

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
Indian Rupee	161,995,314.42	0.27	0.55
Chinese Yuan	94,152,409.06	0.06	0.23
Brazilian Real	49,339,566.99	0.19	0.26
Polish Zloty	42,513,664.44	0.25	0.23
Korean Won	16,420,389.33	0.03	0.06

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)				Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active						
Total	100.00	100.00	-0.00		16.02	16.02	100.00	8.55	100.00
US Dollar	79.59	100.00	-20.41		16.36	12.85	80.20	7.01	82.03
Euro	9.16	0.00	9.16		19.28	1.41	8.77	0.65	7.61
British Pound Sterling	4.62	0.00	4.62		22.68	0.78	4.89	0.42	4.88
Canadian Dollar	1.10	0.00	1.10		22.00	0.22	1.37	0.15	1.73
Indian Rupee	0.83	0.00	0.83		21.29	0.09	0.55	0.02	0.27
Swedish Krona	0.82	0.00	0.82		28.95	0.17	1.09	0.10	1.13
Swiss Franc	0.68	0.00	0.68		22.14	0.10	0.61	0.05	0.61
Japanese Yen	0.57	0.00	0.57		13.06	0.03	0.18	-0.00	-0.05
Danish Krone	0.54	0.00	0.54		26.77	0.10	0.61	0.05	0.63
Chinese Yuan	0.48	0.00	0.48		17.34	0.04	0.23	0.00	0.06
Australian Dollar	0.34	0.00	0.34		20.11	0.05	0.30	0.01	0.15
Brazilian Real	0.25	0.00	0.25		44.34	0.04	0.26	0.02	0.19
Polish Zloty	0.22	0.00	0.22		29.72	0.04	0.23	0.02	0.25
Norwegian Krone	0.12	0.00	0.12		30.49	0.03	0.17	0.02	0.18
New Israeli Sheqel	0.12	0.00	0.12		29.31	0.02	0.15	0.01	0.12



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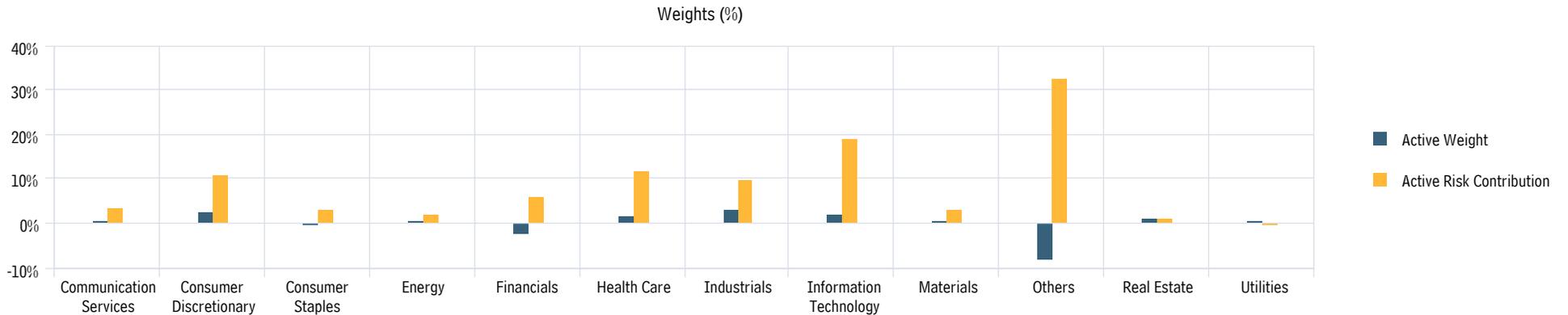
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 POSITIONS: 433
 MODEL: MAC.L

CURRENCY: USD
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 ACCEPTED: 433

Portfolio Allocation by GICS Sector

GICS Sector	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	16.02	8.55	100.00	0.09
Communication Services	4.06	3.91	0.16	19.19	0.28	3.25	0.11
Consumer Discretionary	7.56	4.91	2.66	25.07	0.92	10.79	0.15
Consumer Staples	1.69	2.41	-0.72	20.58	0.25	2.87	0.09
Energy	2.54	2.53	0.00	24.54	0.15	1.76	0.09
Financials	2.04	4.60	-2.55	47.35	0.48	5.59	0.09
Health Care	6.53	4.99	1.55	23.14	0.98	11.48	0.13
Industrials	7.31	4.20	3.11	20.10	0.81	9.47	0.13
Information Technology	10.68	8.66	2.01	28.47	1.61	18.88	0.16
Materials	1.77	1.39	0.38	24.88	0.23	2.69	0.14
Others	51.94	60.20	-8.25	11.76	2.79	32.64	0.03
Real Estate	2.30	1.18	1.12	12.08	0.08	0.94	0.08
Utilities	1.57	1.02	0.55	8.29	-0.03	-0.33	0.03



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APPENDICES:

- Basket Clause

- Liquidity Analysis

BASKET CLAUSE ANALYSIS

Trustee Reporting 287
As of 06/30/2023

Basket Limit	35.00%
Basket Consumed	20.94%
Remaining Capacity	14.06%

	Basket-Eligible Assets*				Total
	Non-Basket Assets	Non-Contributing	Contributing	Basket Assets	
FIXED INCOME	32.69%	3.11%	0.02%	5.55%	41.36%
U.S. Fixed	16.24%	2.74%	0.02%	4.82%	23.83%
Cash/Equivalent	9.93%	---	---	0.00%	9.93%
TIPS	3.00%	---	---	---	3.00%
Convertible Bonds	1.49%	0.03%	0.02%	0.10%	1.64%
OFI	0.04%	0.12%	0.00%	3.88%	4.04%
High Yield	0.32%	2.56%	0.00%	0.80%	3.68%
Bank Loans	0.00%	---	---	0.00%	0.00%
ETI Investments	0.92%	---	---	0.01%	0.93%
Core/Core Plus	0.55%	0.04%	---	0.03%	0.62%
U.S. Structured	16.44%	0.36%	---	0.73%	17.53%
Credit	4.13%	0.36%	---	0.38%	4.87%
Mortgages	4.47%	---	---	0.35%	4.82%
ST Treasury	2.33%	---	---	---	2.33%
Treasury/Agency	1.77%	---	---	---	1.77%
MT Treasury	3.02%	---	---	---	3.02%
LT Treasury	0.72%	---	---	---	0.72%
EQUITY	24.54%	18.73%	5.91%	9.46%	58.64%
Public Equity	24.52%	9.97%	5.91%	0.03%	40.44%
U.S. Equity	23.51%	0.78%	0.46%	---	24.75%
EAFE	0.28%	6.29%	3.73%	0.01%	10.30%
Emerging Markets	0.14%	2.66%	1.58%	0.02%	4.39%
Global	0.60%	0.25%	0.15%	0.00%	1.00%
Alternative Investments	0.01%	8.76%	---	9.43%	18.21%
Hedge Funds	---	---	---	0.00%	0.00%
Infrastructure	0.01%	2.18%	---	0.00%	2.19%
Private RE/Core	0.00%	3.72%	---	---	3.72%
Private RE/Non-Core	0.00%	2.87%	---	0.00%	2.87%
Private Equity	0.00%	---	---	9.43%	9.44%
TOTAL ASSETS	57.22%	21.84%	5.93%	15.01%	100.00%
	Non-Basket:	79.06%	Basket:	20.94%	

This analysis shows basket consumption by investment mandate on a security look-through basis.

* Basket Eligible Assets are subject to the following thresholds - above which investment consumes basket capacity: 10% aggregate portfolio weight for investments in non-U.S. listed equities; 10% aggregate portfolio weight for real assets; and 10% aggregate portfolio weight for investments in high yield bonds and foreign debt issues that are registered with the SEC. To the extent that the value of investments in a particular category exceeds a threshold, the excess consumes basket capacity.

In the above table, the investment of cash held as collateral under the system's securities lending program, is included as a Non-Basket Asset in the Cash/Equivalent line.



AUM as of June 30, 2023

	Current MV	Liquid Assets		
		Today	1 Year	2 Years
PUBLIC EQUITY	\$36,155	\$36,155	\$36,155	\$36,155
U.S.	22,093	22,093	22,093	22,093
EAFE Equity	8,672	8,672	8,672	8,672
Emerging Markets	4,503	4,503	4,503	4,503
Global Equity	886	886	886	886
PUBLIC FIXED INCOME	\$24,486	\$23,806	\$24,115	\$24,115
Short Term Securities	293	293	293	293
U.S. Government	6,997	6,997	6,997	6,997
Mortgages				
Core Mortgages	4,074	4,074	4,074	4,074
ETI	828	148	458	458
Credit - Investment Grade	6,346	6,346	6,346	6,346
Corporate - High Yield	3,268	3,268	3,268	3,268
Corporate - Bank Loans	3	3	3	3
UST - Inflation Protected	2,676	2,676	2,676	2,676
ALTERNATIVE ASSETS	\$19,816	\$2,660	\$3,547	\$3,548
Private Equity	8,433	0	0	0
Private Real Estate	5,870	0	0	0
Infrastructure	1,965	0	0	0
Opportunistic Fixed Income	3,547	2,660	3,547	3,547
Hedge Funds	1	0	0	1
Total Assets	\$80,456	\$62,621	\$63,817	\$63,818
Total Illiquid \$		\$17,836	\$16,639	\$16,639
Total Illiquid %		22.2%	20.7%	20.7%
Unfunded OFI Commitments	\$1,104			
Unfunded INF Commitments	\$1,718			
Unfunded PE Commitments	\$4,651			
Unfunded RE Commitments	\$2,481			
Total commitments \$	\$9,954			
Total commitments %	12.4%			

NYCERS Liquidity Profile - Static Analysis

AUM as of June 30, 2023

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$17,836	\$16,639	\$16,639
Total Illiquid %	33.3%	31.0%	31.0%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids

	Current MV	Liquid Assets		
		Today	1 Year	2 Years
Total Assets	\$80,456	\$62,621	\$63,817	\$63,818

Private Equity, Real Estate, Infrastructure and Opportunistic Fixed Income Stress Case

Unfunded OFI Commitments	\$221	\$442
Unfunded INF Commitments	\$344	\$687
Unfunded PE Commitments Drawn	\$930	\$1,861
Unfunded RE Commitments Drawn	\$496	\$992
Total commitments \$	\$1,991	\$3,982
Total commitments %	2.5%	4.9%

Total Illiquid \$	\$18,630	\$20,620
Total Illiquid %	23.2%	25.6%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids

See Assumptions Page for Full Details

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$17,836	\$18,630	\$20,620
Total Illiquid %	33.3%	34.7%	38.4%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids

Additional Assumptions

Alternative Assets Liquidation Estimates: Private Equity, Private Real Estate, and Infrastructure: assumes no liquidations in 2-year horizon; Opportunistic Fixed Income: assumes 75% immediate availability and 100% availability within one year; Hedge Funds: estimates provided by consultant.

Illiquid Ratio: Illiquid investment value for each of the three time horizons as a percentage of current AUM. The ratio is calculated under three scenarios: 1) Unadjusted estimated illiquid value to current total assets. 2) Unadjusted estimated illiquid values to current total assets after a 33% decline. 3) Estimated illiquid value after Fixed Income Stress Case to current total assets after a 33% decline.

Unfunded Commitments: Uses custodian value at month end.

Denominator Effect: Measures Illiquid Ratio for each time horizon after an assumed 33% decline in portfolio value.

Fixed Income Stress Case: Measures impact of new commitments to illiquid asset classes assuming no capital calls and a level 5-year pacing schedule.